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Proto-Elamo-Dravidian: The Evidence and its Implications

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CONTENTS (General)

	PAGE		PAGE
List of tables	4	Chapter Four: The Proto-Elamo-Dravidian	
List of figures	4	lexical etyma	93
Abbreviations	5	Chapter Five: Derivational and morphological	
Acknowledgments	7	etyma	106
Contents (specific)	9	Chapter Six: Implications	128
Introduction	13	Appendix One: The Middle Elamite bilingual ...	136
Chapter One: Comparative Dravidian	16	Appendix Two: Additional words in common	
Chapter Two: Elamite	56	between Elamite and Dravidian	141
Chapter Three: Phonological correspondences		Bibliography	148
and developments	83	Index of lexical etyma, similar pairs, and	
		grammatical morphemes in PED	153

LIST OF TABLES

	following page:
1.1 The Dravidian Languages	17
1.2 Proto-Dravidian Phonemes and their Distribution	25
1.3 Dravidian Morphophonemics	28
1.4 Bases and Cases in Proto-Dravidian	37
1.5 Proto-Dravidian Personal Pronouns and their Reflexes	38
1.6 A. Third Person Appellative Endings B. Third Person Deictic Appellatives	40
1.7 Proto-Dravidian Numerals	42
1.8 Attested Medials after P. S. Subrahmanyam, 1971	48
1.9 The Proto-Dravidian Verbal Nonpast and its Reflexes	49
1.10 The Proto-Dravidian Appellative Nonpast and its Reflexes	51
2.1 Cases and Postpositions in Elamite	68
2.2 Elamite Pronouns	70
2.3 Achaemenid Elamite Verb Morphology (after Hallock, 1959)	72
2.4 Person and Number Endings in Middle Elamite	76
2.5 The Basic Verb Paradigms in Middle Elamite (<i>hutta</i> -‘to do’)	79

3.1 The Phonological Correspondences and their Citations	84
3.2 Phonological Changes in Elamite	86
3.3 Major Phonological Changes in Dravidian	87
5.1 Proto-Elamo-Dravidian Noun Derivatives	109
5.2 Noun Endings (A. Plurals and B. Cases)	111
5.3 PED Personal Pronouns and their Reflexes	113
5.4 The PED Appellative System and its Reflexes	119
A1 Lexical Words in the Akkadian Text	138
A2 Proper Names	138
A3 The Elamite Text and its Correspondences: Words and Roots	139
A4 The Elamite Text and its Correspondences: Endings and Grammatical Morphemes	140

LIST OF FIGURES

	Page
1 Stammbaum Classification of the Dravidian Languages	20
2 Stammbaum Classification of PED	117
3 Stepped Correspondences between Elamite and Dravidian Verbal Morphologies	128
4 The Middle Elamite Bilingual: Akkadian Version	136
5 The Middle Elamite Bilingual: Elamite Version	137

ABBREVIATIONS

acc.	accusative	ME	Middle Elamite
AE	Achaemenid Elamite	n.	neuter, nonmasculine
Akk.	Akkadian	N	New, Modern; nasal
Bad.	Badaga	NDr	North Dravidian
Br.	Brahui	neg.	negative
Br(Sw)	citations on Brahui from Warren Swidler	Nk.	Naiki
C	consonant, nonvocalic; colloquial	nom.	nominative
CC	consonant cluster, geminate consonant	O	Old
CDr	Central Dravidian	obl.	oblique
cvb.	converbial	OE	Old Elamite
dat.	dative	OIr.	Old Iranian
DB	Darius, Behistun inscription, cf. Kent, 1953	Oll.	Ollari
DE	Darius, Elvend inscription, cf. Kent, 1953	p.	plural
DED	<i>Dravidian Etymological Dictionary</i> , Burrow and Emeneau, 1960	P	Proto; plosive, obstruent
DED	citations from above	Pa.	Parji
DED(S)	<i>Dravidian Etymological Dictionary: Supplement</i> , Burrow and Emeneau, 1969	PDr	Proto-Dravidian
DED(S)	citations from above	Pe.	Pengo
Den	citations from "Dravidian Etymological Notes," Burrow and Emeneau, 1972	PED	Proto-Elamo-Dravidian
DED(n)	} citations from combination of the foregoing	Pel	Proto-Elamite
DED(S)		Per.	Persian
DED(S,n)		pex.	exclusive plural
DNa	Darius, Naqš-i-Rustam, cf. Kent, 1953	PFT	<i>Persepolis Fortification Tablets</i> , Hallock, 1969
Dr. (+ digit)	Dravidian phonological rule, see table 3.3	PFT	citation from Hallock, 1969: pp. 663–776
EKI	<i>Elamische Königsinschriften</i> , see König, 1965	pin.	inclusive plural
El.	Elamite	pl.	plural
El. (+ digit)	Elamite phonological rule, see table 3.2	poss.	possessive
f.	feminine	r,R	resumptive, reflexive; PDr r and z
Gad.	Gad(a)ba	RAE	Royal Achaemenid Elamite
gen.	genitive	(R)AE	both Royal and other Achaemenid Elamite
Gk.	Greek	s.	singular
Go.	Gondi	SCDr	South Central Dravidian
h.	human	SDr	South Dravidian
IA	Indo-Aryan	Skt.	Sanskrit
inf.	infinitive	Sum.	Sumerian
intrans.	intransitive	Ta.	Tamil
Ir.	Irula	TaKod	Tamil-Kodagu
K	citation from König, 1965: pp. 181–228	TAM	Tense-Aspect-Mood marker
Ka.	Kannada	TaTu	Tamil-Tulu
Ko.	Kolami	Te	Telugu
Kod.	Kodagu	TeKui	Telugu-Kui
KolPa	Kolami-Parji	TL	citations from <i>Tamil Lexicon</i>
Kond.	Konda	To.	Toda
Kor.	Koraga	trans.	transitive
Kur.	Kurux	Tu.	Tulu
KxMt	Kurux-Malto	TZ1	citations from Reiner, 1969: pp. 116–118
L	Late; lateral	TZ2	citations from Lambert, 1965
LME	Late Middle Elamite	TZ3	citations from Stève, 1967
loc.	locative	V	vowel, vocalic
m.	masculine	Ū	short vowel
M	Middle	Ŵ	long vowel
Ma.	Malayalam	Ŷ	short and/or long vowel
Malt.	Malto	var.	variant
Mand.	Manda	voc.	vocative
MDP	<i>Mémoires de la Délégation archéologique en Iran</i>	XPa	Xerxes, Persepolis inscriptions, cf. Kent, 1953
		1	first person
		2	second person
		3	third person

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A project of this nature, which attempts to compare details of languages that are not necessarily well understood, of necessity draws heavily on previous work. What is presented here depends upon the often massive amount of scholarship produced by others. This is represented, in particular, by the Dravidian etymological work of T. Burrow and Murray B. Emeneau, the morphological compendium of Dravidian verbal morphology of P. S. Subrahmanyam, and the comparative phonology of Kamil V. Zvelebil. The analysis of Elamite given here relies almost completely on the analyses of Herbert H. Paper, Richard T. Hallock, Erica Reiner, and Françoise Grillot. Finally, I am grateful for the inspiration of Robert Caldwell, who started this work over a hundred twenty-five years ago.

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PROTO-ELAMO-DRAVIDIAN: THE EVIDENCE AND ITS IMPLICATIONS

DAVID W. McALPIN

CONTENTS (SPECIFIC)

INTRODUCTION

- 010 Purpose and Methodology
- 011 Scope and Limitations
- 020 History of the Connection
 - 020.0 Earlier connections between Elamite and Dravidian
 - 020.1 Elamite studies
 - 020.2 Previous work by the author
- 030 Appellatives
- 040 Organization

I. COMPARATIVE DRAVIDIAN

- 100 Brief History
- 101 Major Sources
 - 101.0 Historical surveys
 - 101.1 Current data sources
- 1.1 The Dravidian Languages
 - 110 Introduction
 - 110.0 Location
 - 110.1 Social conditions
 - 111 An Overview of the Dravidian Languages
 - 111.1 Tamil
 - 111.2 Malayalam
 - 111.3 Kannada
 - 111.4 Telugu
 - 111.5 Tulu and Kodagu
 - 111.6 The Tribal Dravidian Languages
 - 111.60 Definition
 - 111.61 The Nilgiris
 - 111.62 Gondi
 - 111.63 Koraput District and other tribal languages
 - 111.64 Kurux and Malto
 - 111.7 Brahui
 - 112 Subgrouping
 - 112.1 Growth of tripartite hypothesis
 - 112.2 Problems with tripartite hypothesis
 - 112.3 Current situation
 - 112.4 Use of the term "Proto-Dravidian"
 - 112.5 Use of the tripartite labels
- 1.2 Comparative Dravidian Phonology
 - 120 Level of Analysis, Problems, Sources
 - 121 Proto-Dravidian Phonemics
 - 121.0 Unusual pattern
 - 121.1 Lax-tense contrast
 - 121.2 Vowels
 - 121.21 Epenthetic vowel
 - 121.3 Consonants
 - 121.31 Distribution and patterning
 - 121.32 Consonant clusters
 - 122 Dravidian Morphophonemics
 - 122.0 Root, augment, and stem
 - 122.1 Derivation and conventions
 - 122.11 Krishnamurti's rule
 - 122.12 Emeneau's rule
 - 122.13 Zvelebil's rule
 - 122.14 Rao's observations
 - 122.15 Stem mutation rule
 - 122.2 Overall pattern

1.3 Comparative Dravidian Morphology

130 The Morphological System

- 130.0 History of previous work
- 130.1 Morphological collapse
- 130.2 Nature of grammatical change
- 130.3 Dimorphism:
 - 130.31 Adjectives
 - 130.32 Clitics
 - 130.33 Particles

131 Substantives

- 131.0 Structure of the noun
 - 131.01 Noun root
 - 131.02 Gender
- 131.1 Derivation of Nouns
 - 131.11 **-anrə/*-an*
 - 131.12 **-aN*
 - 131.13 **-ay/*-i*
 - 131.14 **-may*
 - 131.15 **-tə (*-tti, *-a/)*

131.2 Basic Nominal Morphology

- 131.20 Bases
 - 131.201 Oblique
 - 131.202 Compounding
- 131.21 Plurals
- 131.22 Cases
 - 131.221 Nominative
 - 131.222 Accusative
 - 131.223 Dative
 - 131.224 Genitives
 - 131.225 Others
 - 131.226 Locative constructions

131.3 Personal Pronouns

- 131.30 Introduction
- 131.31 First person
- 131.32 Second person
- 131.33 Resumptive
- 131.34 Possessive clitics

131.4 Appellatives

- 131.41 Deictic-interrogative
- 131.42 Other appellatives
- 131.43 Verbal appellatives

131.5 Numerals

- 131.50 Structure
- 131.51 Numerical base and "nines"
- 131.52 Attested forms

132 The Verb

- 132.0 Structure and format
 - 132.01 Verb bases
 - 132.02 Root/stem/base
- 132.1 Verbal Derivation
 - 132.10 Verb stems and augments
 - 132.11 Primary Augments
 - 132.111 **Vr₁, *-Vl*
 - 132.112 **-Vr₂*
 - 132.113 **-Vz*
 - 132.114 Others

- 132.12 Secondary augments
- 132.13 Agentivity (Causatives)
- 132.131 Paramasivam's model
- 132.1311 Affectives
- 132.1312 Effectives
- 132.1313 Causatives
- 132.132 Application to Proto-Dravidian
- 132.133 Weak/strong contrast
- 132.134 Affective/effective in Tamil-Kodagu
- 132.1341 *-mp/-pp*
- 132.1342 *-ŋk/-kk*
- 132.1343 Proto-South-Dravidian innovation
- 132.14 Proto-Dravidian system and summary
- 132.2 The Finite Verb
 - 132.20 Structure
 - 132.201 *Dravidian Verb Morphology*
 - 132.202 Use of finite forms
 - 132.21 Attested Medials
 - 132.211 Past
 - 132.212 Nonpast
 - 132.213 Negative
 - 132.22 Personal endings
 - 132.221 First person endings
 - 132.222 Second person endings
 - 132.223 Third person endings
 - 132.23 Analyses
- 132.3 Other Verbal Forms
 - 132.31 Non-finite predicates [converbs]
 - 132.311 Converbial (adverbial participle)
 - 132.312 Infinitive
 - 132.313 Negative
 - 132.32 Participles
 - 132.33 Conditional
 - 132.34 Imperatives
 - 132.35 Verbal nouns
- 132.4 The Proto-Dravidian Nonpast Paradigms
 - 132.41 The Old Tamil archaic nonpast
 - 132.42 Other attestations
 - 132.43 Proto-Dravidian nonpast appellatives
- 132.5 Proto-Dravidian verbal system: a preliminary synopsis
- 1.4 Dravidian Syntax
- 140 Areal Considerations
- 141 Typical Examples from Tamil Syntax
 - 141.1 Basic ordering
 - 141.2 Complex sentences
 - 141.3 Quotatives
 - 141.4 Appellatives
- II. ELAMITE
- 2.1 Elam
 - 211 The Land
 - 211.0 Introduction
 - 211.1 Khuzistan
 - 211.2 Zagros
 - 211.3 Ecological restrictions
 - 211.4 The interior
 - 212 Prehistory and Archaeology
 - 212.0 Introduction and sources
 - 212.1 Agricultural revolution
 - 212.2 Urban revolution
 - 212.3 Writing
 - 212.4 Trade and contacts
- 2.2 History of Elam
 - 221 The Early Period (*ca.* 2500–1500 B.C.)
 - 221.1 Awan
 - 221.2 Simaš
 - 221.3 The *Sukkal-mah* of Susa
 - 222 Classical Elamite Empire (*ca.* 1500–1300 B.C.)
 - 222.1 The Igiḫalkids
 - 222.2 The Shutrukids
 - 223 New Elamite Kingdom (*ca.* 800–640 B.C.)
 - 223.0 Iranian tribes
 - 223.1 Political history
 - 224 The Achaemenid Period (*ca.* 600–300 B.C.)
 - 225 Posthistory
 - 225.1 Greek period (Elymais)
 - 225.2 Sassanian and Islamic
 - 225.20 Later references
 - 226.0 Postscript
- 2.3 The Grammar of Achaemenid Elamite
 - 230 Achaemenid Elamite
 - 230.0 Nature of texts, dates, Old Persian influence
 - 230.1 Sources and references
 - 231 Achaemenid Elamite Script
 - 231.0 Syllabic nature
 - 231.1 CVC and “broken writing”
 - 231.2 Lack of voicing and doublets
 - 231.3 Double consonants CV-VC-CV
 - 231.4 Vowels (length, nasalization, final ə)
 - 231.5 Conventions and transcription
 - 231.6 Logograms
 - 232 Achaemenid Elamite Phonology
 - 232.0 Phonemes
 - 232.1 Obstruents
 - 232.2 Sonorants
 - 232.3 Written gemination
 - 232.4 Stem formation and “reduplication”
 - 233 Achaemenid Elamite Morphology
 - 233.1 The Achaemenid Elamite Noun Phrase
 - 233.10 The noun
 - 233.11 Noun derivation
 - 233.111 *-ra/-pe*
 - 233.112 *-me*
 - 233.113 *-da*
 - 233.114 *-əN*
 - 233.115 *-aš*
 - 233.12 Plural
 - 233.13 Cases and Postpositions
 - 233.130 Case
 - 233.131 The genitive
 - 233.132 Pronouns used as case markers
 - 233.133 Other postpositions
 - 233.14 Adjectives
 - 233.2 Pronouns
 - 233.20 General structure
 - 233.21 The accusative
 - 233.22 Genitives and possessives
 - 233.221 Possessive enclitics
 - 233.23 First person
 - 233.24 Second person
 - 233.25 Third person
 - 233.251 Unusual dative forms
 - 233.3 Verbs
 - 233.31 The “conjugations”
 - 233.310 Nature
 - 233.311 Format
 - 233.312 Description of groups
 - 233.313 Relationships
 - 233.32 Clitics

- 233.321 *-ut*
- 233.33 Imperatives
- 233.34 Other verbals
- 233.4 Particles
 - 233.41 Numerals
 - 233.42 Other particles
- 234 Achaemenid Elamite Syntax
 - 234.0 Basic ordering
 - 234.1 Relative clause construction
- 2.4 The Grammar of Middle Elamite
 - 240 Pre-Achaemenid Elamite
 - 240.0 Nature of sources, periodization
 - 240.1 Sources of this work
 - 241 Middle Elamite Script and Phonology
 - 241.0 Script, transcription, transliteration
 - 241.1 Phonology and /h/
 - 241.2 Vowel alternation (u/i)
 - 241.3 Logograms
 - 242 Middle Elamite Morphology
 - 242.0 Nature
 - 242.1 Appellatives
 - 242.10 Definition and use
 - 242.11 Middle Elamite forms
 - 242.2 The Noun
 - 242.20 Noun proper and plural
 - 242.21 Noun derivation
 - 242.211 *-rə/-pə*
 - 242.212 *-me*
 - 242.213 *-tə*
 - 242.214 *-əN*
 - 242.215 *-(a)š*
 - 242.22 Postpositions
 - 242.221 Origins of *-na*
 - 242.3 Pronouns
 - 242.31 Personal pronouns
 - 242.311 Double pronouns
 - 242.32 Universals
 - 242.4 The Verb
 - 242.41 Verb stem
 - 242.411 Reduplication
 - 242.412 Enlarged stems
 - 242.42 The finite verb
 - 242.421 Imperative
 - 242.43 Verbals
 - 242.431 Verbal predicates
 - 242.44 Verbal Clitics
 - 242.441 *-a*
 - 242.442 *-ta*
 - 242.443 Precative *-ni*
 - 242.45 Relationship to Achaemenid Elamite verb
 - 242.5 Other Morphology
 - 242.51 Appellative bases
 - 242.511 Pronominals
 - 242.512 Numerals
 - 242.513 Negatives
 - 242.52 Particles
 - 243 Middle Elamite Syntax
 - 243.1 Basic ordering and agreement
 - 243.11 Prohibitive
 - 243.12 Precatives
 - 243.13 Subject-verb agreement
 - 243.2 Appellative concord
 - 243.3 Grillot's theories on *-a* and *-i*

III. PHONOLOGICAL CORRESPONDENCES AND DEVELOPMENTS

- 310.0 Regularity and attestations
 - 310.1 Alphabetical order
 - 310.2 Format and conventions
- 311 Vowels and Semivowels
 - 311.1 PED **a*, **i*, **u*
 - 311.11 PED **i*
 - 311.2 PED **e*, **o*
 - 311.3 The neutral vowel
 - 311.4 Post-PED Developments
 - 311.41 Dravidian developments
 - 311.411 Stem shaping
 - 311.412 Metaphony
 - 311.413 Metathesis
 - 311.42 Apheresis in Elamite
 - 311.43 Elamite vowel shifts
- 312 PED **h*
 - 312.0 PED **h*
 - 312.1 PED **w*
- 313 Obstruents
 - 313.0 Normal pattern
 - 313.1 PED **š*
 - 313.2 Variants in PED **k*
 - 313.3 Post-PED Developments
 - 313.31 PED **k*
 - 313.32 PED **c*
 - 313.33 PED **t* and **t*
 - 313.34 PED **p*
- 314 Nasals and PED **v*
 - 314.0 Problems
 - 314.1 PED **n*
 - 314.2 PED **m*
 - 314.3 PED **v*
- 315 Liquids
 - 315.0 Proto-Dravidian pattern
 - 315.1 The laterals, PED **l* and **l*
 - 315.2 Taps and trills, PED **r* and **r*
 - 315.3 PED **r*

IV. THE PROTO-ELAMO-DRAVIDIAN ETYMA

- 410.0 The PED root
 - 410.1 Reliability of data
- 421 The Format
 - 421.0 Entry structure
 - 421.1 Abbreviations
 - 421.11 For sources
 - 421.12 For languages
 - 421.13 Others
- 422 Lexical Etyma in Proto-Elamo-Dravidian

V. DERIVATIONAL AND MORPHOLOGICAL ETYMA

- 5.1 Nominal Derivation
 - 511 PED **mai* > PEI **-may* (>*-me*) : PDr **-may*
 - 512 PED **-əN* > PEI **-əN* : PDr **-aN*
 - 513 PED **-tə* > PEI **-tə* (*-da/-te*) : PDr **-tə*
 - 514 PED **-(a)š* > PEI **-(a)š* : PDr **-ay/*-i*
 - 515 PED **-(a)ntə* > PEI **-rə* : PDr **-anrə*
 - 516 Discussion
- 5.2 Noun Morphology
 - 520 Basic Pattern
 - 521 Plurals
 - 521.0 Usage
 - 521.1 The pronominal plural, PED **-m* > PEI **m* : PDr **-m*
 - 521.2 The appellative plural, PED **-pə* > PEI **-p* : PDr **-va*
 - 521.3 Others
 - 522 Postpositions (Cases)

- 522.1 The accusative, PED *-n > PEI *-n : PDr *-V_n (-an)
 522.2 The adessive, PED *-akkə > PEI *-ikkə : PDr *-kkə
 522.3 The genitives
 522.30 Multiplicity
 522.31 PED *-a > PEI *-a : PDr *-ā
 522.32 PED *-in > PEI *-inni : PDr *-i_n
 522.33 The genitive -na in Achaemenid Elamite
 522.4 The locative/oblique, PED *-tə > PEI *-tə (-te) : PDr *-t(t)ə
 522.5 Paradigm comparison
 5.3 Personal Pronouns
 530.0 Introduction
 530.1 Plural (*-m)
 530.2 Oblique (*-n)
 531 First Person Singular, PED *i > PEI *u : PDr *yān/y- : Br ī
 531.1 Oblique and origins of Proto-Dravidian nominative
 531.2 Possessive clitic
 532 First Person Plural, PED *nəNkə > PEI *nikə : PDr *nām : Br nan
 533 Second Person Singular, PED *ni > PEI *ni : PDr *nī(n) : Br nī
 534 Second Person Plural, PED *nim > PEI *num (*nim?) : PDr *nīm : Br num
 535 Resumptive Pronouns, PED *ta(n) > PEI *tə(n) : PDr *tān : Br tēn
 535.1 Proto-Dravidian evidence
 535.2 Possessive clitic
 535.3 Reflexives
 535.31 AE tanna
 535.32 AE tun
 536 Third Person, PED *i > PEI *i : Br ī-
 536.0 Pronoun
 536.01 Brahui's third person base ī
 536.1 Position of Brahui
 536.11 Evidence
 536.12 Alternative first person forms
 537 Pattern and System
 5.4 Appellatives
 541 Appellative Bases
 541.1 Deictic-Interrogatives
 541.10 Structure
 541.11 Attestations of deictic bases
 541.12 Interrogative base
 541.2 Numerals
 541.20 Limited attestations
 541.21 Proto-Dravidian forms for 'one'
 541.22 Evidence in Elamite
 542 Appellative Personal Endings
 542.1 First person singular, PED *-kə > PEI *-kə : PDr *-kə
 542.2 First person plural, PED *-uN > PEI *-un(kə) : PDr *-(k)um
 542.3 Second person, PED *-ti > PEI *-tə : PDr *-ti
 542.4 Third person singular (human/masculine), PED *-(u)ntə > PEI *-tə : PDr *-anrə
 542.5 Third person plural, PED *-pə > PEI *-pə : PDr *-pa (>-va)
 542.6 Neuter appellatives
 542.60 Two usages
 542.61 The verbal neuter appellative, PED ∅ > PEI ∅ : PDr ∅
 542.62 Neuter formatives paralleling the appellatives
 542.7 Other Appellatives and Parallel Forms
 542.71 Plural in r (?)
 542.72 First person/plural/emphatic in *-ət
 543 Paradigm Comparison
 5.5 Verbal Morphology
 551 Auxiliaries
 551.0 Introduction
 551.1 PED *man > PEI *man : PDr *mañnə 'to become'
 551.11 Quotation markers
 551.2 The negative verb, PED *al > PEI *an + ri (>ani) : PDr *al
 552 Verbal Personal Endings
 552.0 Lack of paradigm
 552.1 Third person, PED *-(V)š > PEI *-š : PDr *-ay
 552.2 Second person, PED *-ti > PEI *-ti : PDr *-ti
 553 Other Endings and Clitics
 553.1 The past marker, PED *-tə > PEI *-tə : PDr *-t(ə)
 553.2 Subordinator, PED *-a > PEI *-a : PDr *-a
 553.20 Pattern in Elamite
 553.21 Dravidian infinitive
 553.22 Dravidian past participle
 553.23 Comparison
 553.3 Imperatives in a nasal
 554 Medials
 554.1 The durative/nonpast, PED *-N > PEI *-n : PDr *-əN : Br -un
 554.10 Citations
 554.11 Predicate
 554.12 Participle
 554.2 Mediopassive, PED *-(N)k > PEI *-k : PDr *-(ŋ)k : Br -ng
 554.20 Complexity of pattern
 554.21 Mediopassives
 554.22 Stem formative
 554.23 Nonpast (PDr *-(ŋ)kk)
 554.24 Participles
 554.25 Pasts in -k (?)
 554.26 Discussion
 555 Augments
 555.0 Nature of evidence
 555.1 The causative, PED *-t- > PEI *-t- : PDr *-tt-
 555.2 Other augments
 556 Systematic Relationships
 VI. IMPLICATIONS
 6.1 Cognation
 610 Introduction and General Theory
 611 Phonological Correspondences
 611.1 Implied problems of consistency
 612 Morphological Correspondences
 612.1 Systematic nature
 613 Syntax
 613.0 Kuiper's query
 613.1 Syntactic correspondences
 614 Summary
 6.2 Implications for Comparative Dravidian
 621 Position of Brahui
 622 Dravidian Subgrouping
 623 Dravidian Morphological Structures
 623.1 Tamil future
 623.2 Dual based stepped model
 6.3 South Asian Prehistory
 631 Semantic Evidence from Proto-Dravidian
 631.0 Semantics of Proto-Dravidian
 631.1 Animal Terminology
 631.11 Proto-Dravidian₀
 631.12 Proto-Dravidian₁

- 631.13 Proto-Dravidian₂
- 631.14 Proto-South-Central-Dravidian
- 631.15 Conclusions
- 631.2 Agricultural Terminology
 - 631.21 Proto-Dravidian forms
 - 631.22 Archaeological evidence
 - 631.23 Conclusions
- 632 PED Etyma and Their Cultural Implications
 - 632.1 PED **upaṭ* 'brick' and other cultural clues
 - 632.2 PED **šeṭ*, 'pay tribute'
 - 632.3 PED **taṭ* 'push in' and writing
- 633 Archaeological Framework
- 634 Other Evidence
 - 634.1 Distribution of Dravidians
 - 634.2 Toponymy
- 635 Postscript
 - 635.1 The Indus Valley
 - 635.2 Other possible cognate relationships
- 636 Summary

APPENDIX I: THE MIDDLE ELAMITE BILINGUAL

APPENDIX II: ADDITIONAL WORDS IN COMMON BETWEEN ELAMITE AND DRAVIDIAN

- A. Probable Etyma with Methodological Problems
- B. Possible Etyma with Phonological Problems
- C. Possible Etyma with Problems in Attestation or Semantics
- D. Probable Loanwords from Elamite into Dravidian Languages
- E. Rejected Etyma from Previously Published Sources

BIBLIOGRAPHY

INDEX OF LEXICAL ETYMA, SIMILAR PAIRS, AND GRAMMATICAL MORPHEMES IN PED

INTRODUCTION

010. In this work I intend to demonstrate that the Dravidian language family of South Asia is related to Elamite, a major language of ancient West Asia. Also, I will follow up on some of the implications of this relationship. To do this, summaries are provided of comparative Dravidian and of Elamite grammar. Every effort has been made to present a basic, unbiased analysis in these summaries, although the requirements of presentation have called for some relabeling and reordering. From this base, I go on to demonstrate the systematic correlations in phonology, lexicon, and morphology for which cognation is the only possible explanation. The methodology employed is traditional, philologically based, comparative linguistics. This has been done not because there have not been major advances in comparative theory, but because the traditional approach best fits the data. The scanty base for our knowledge of Elamite cannot admit powerful grammatical analyses, and neither will our knowledge of Proto-Dravidian, which is erratic at best. However, both are entirely sufficient for the fundamental question to be solved by the traditional comparative method.

011. While this work contains a fairly detailed and thorough discussion of comparative Dravidian

and of Elamite grammar, it is not a comparative grammar or even the beginnings of one. Particularly for Dravidian, the points discussed have been selected with the goal of their cognation with Elamite clearly in mind. An attempt was made to be more inclusive in the general discussion of Elamite grammar, but here virtually all of the work is secondary and derived from other sources. I wrote with a varied audience in mind. The discussion of Elamite was written for a Dravidianist and *vice versa*. I am a Dravidian linguist, and there is a perceptible bias in favor of that field's terminology. Background introductions in archaeology and history are provided for those who are unfamiliar with the ancient Near East. If the reader already knows where Elam was, these sections will add little to his perspective. This work has one goal: to prove beyond doubt that Elamite and Dravidian are cognate. All information which is needed or helpful toward this end has been included, otherwise not. The discussion of the implications has been kept to the immediate results and is primarily philological and linguistic. I am well aware of the implications that this work may have for the archaeology and prehistory of South Asia. However, any meaningful discussion of them is clearly beyond the scope of this study.

020 *The History of the Connection*

020.0 The concept that Elamite and Dravidian are in some way related dates from the very beginnings of both fields, in the nineteenth century. In their initial attempts to find cognate languages, philologists looked to all possible sources. For both Dravidianists and Elamologists, these initial attempts were made toward Finno-Ugric and Altaic. Occasionally, almost as a side issue, remarks were made relating Elamite and Dravidian. Later, as these endeavors had not proved fruitful and as comparative linguistics gained in precision, such efforts became less common, more speculative, and less respectable. Even when discussed, they only rarely made it into print.

In 1853, Edwin Norris wrote a long article on the Elamite inscription at Behistun. In the course of this article, Norris made numerous comparisons with Tamil and other Indian languages. In particular, he noted that the script of Elamite did not indicate contrastive voicing and worked on the same principles as the Tamil script (Norris, 1855: pp. 6–7):

In one or two points of phonography this alphabet resembles that used by the Tamils: there is no distinction made between surd and sonant consonants at the beginning of a word, and in the middle of a word the same consonant must have been pronounced as a sonant when single and a surd when double. . . . This rule is not precisely without exception, but it is very generally observed.

In 1856, when Robert Caldwell published his *Comparative Grammar of the Dravidian or South Indian Family of Languages*, he incorporated Norris's work, putting it as the first suggested affiliation for Dravidian and discussing the connection at some length; see Caldwell, 1856: pp. 43–45, 1913[1974]: pp. 65–67. Caldwell made several detailed observations on similarities between Elamite and Dravidian, including the second person and the accusative and dative case endings. Dravidianists have generally missed the reference, since Caldwell referred to Elamite only as “the language of the tablets.”¹ Dravidianists never picked up on Caldwell's suggestions, and as with many of his ideas, comparative Dravidian remained essentially static for over fifty years. The high quality of his work, rather than stimulating further research, caused scholarship to turn to other, less explored paths.

However, the idea of a connection with Dravidian remained alive in Elamite studies. These were often put forth as speculative or as unsupported observations and apparently many were never published. Casual observations include Pedersen (1962: p. 128) and verbal reports that the Danish scholar Vilhelm Thomsen discussed the idea around 1910. Other examples include articles by Georg Hüsing (1901, 1910) and by Alfredo Trombetti (1913). This type of position is well exemplified by Ferdinand Bork (1925: pp. 82–83), who made a quite detailed case for Elamite's relationship with Brahui. However, there was not enough information available on Elamite for a convincing case one way or the other.

The best description of the relationship between Elamite and Dravidian, until recently, was given by I. M. Diakonoff (1967). After discussing the Elamite language at some length, he presented in six pages all of the arguments for a genetic relationship between the two languages, along with a list of seven possible etyma. He concluded that while the connection was possible and suggestive, there simply was not enough information available to prove the case.² Progress was to depend upon substantial additional sources on Elamite.

020.1 Elamite Studies. Beginning with the decipherment of the trilingual Behistun inscription, also the inception of Old Persian and Akkadian studies,

Elamite has always been the stepchild of cuneiform scholarship. For a short history of the field, see Reiner, 1969: pp. 54–57. An early period concerned solely with the decipherment came to an end with Weissbach (1911). French excavations at Susa shifted interest to the earlier Elamite sources found there, but results came sporadically. The period around the 1950's saw an expansion of work on Elamite; major examples include Cameron, 1948; Labat, 1951; Paper, 1955; Hallock, 1959, 1960, 1962, and 1965; and Reiner, 1969 (publication was long delayed). The mid and late 1960's saw the appearance of results of many years' work. König (1965) published *Die elamischen Königsinschriften* with texts and glossary for Middle Elamite. In 1969, R. T. Hallock published his monumental *Persepolis Fortification Tablets*, at once increasing the Elamite corpus and providing an exhaustive glossary for Achaemenid Elamite. New and substantive work began coming out of France—Stève, 1962, 1963, 1967; Lambert, 1965, 1974; Grillot, 1970, 1973. The missing sources for further work had arrived.

020.2 Using the consistent, extensive, and critical edition of Achaemenid Elamite vocabulary found in Hallock, 1969, I (McAlpin, 1974a) was able to show that a consistent set of phonological correspondences with Dravidian could be set up for etyma encompassing a significant portion of available Elamite vocabulary. That article, published in *Language*, gave only a very short discussion of etyma and brief comments on morphology.

There never had been a problem with noun morphology, but the morphologies of the pronominal and verbal systems remained both suggestive and elusive. A partial breakthrough came with the realization that archaic verb forms in Old Tamil aligned perfectly with a verb paradigm in Elamite. This was published in both the *International Journal of Dravidian Linguistics* (McAlpin, 1974b) and in augmented form in *Current Anthropology* (McAlpin, 1975). While this work was well received, acceptance was far from universal. This was largely due to the overly brief and announcement-like quality of these articles. Work on the problem has advanced steadily and major sources on Middle Elamite have been added. I decided that there should be no more partial statements pending a complete statement of the connection; this is the primary purpose of this work.

While our knowledge of Elamite is far from secure, most of the difficulties have come from the Dravidian side. There have been major misconceptions to overcome. The impact of Elamite on Dravidian comparative grammar is comparable to that of Sanskrit on European languages.

¹ This, somewhat embarrassingly, includes the author. My first article (McAlpin, 1974a) was almost ready for submission when I stumbled upon Caldwell's reference.

² When I first started seriously investigating Elamite and Dravidian, I came to the same conclusion until I encountered Hallock's (1969) glossary of Achaemenid Elamite. There is no reason to believe that Diakonoff would not have made these same discoveries if he had had this extensive lexical source.

030 Appellatives

030.0 A possible subtitle to this work is "A Diachronic Study of Appellatives." Since they are so crucial in this work and since reference to them (at least by this name) is restricted to Dravidian studies, it is best to give a general introduction to the concept. Simply stated, an appellative is a noun, pronoun, or any other part of speech, except a finite verb, with a personal ending attached. These personal endings are usually related to the personal pronouns and the personal endings used for finite verbs, but they need not be. This combination of a substantive with a set of personal endings is unusual and opens up new possibilities in syntax. Appellatives seem to be related to the syntactic device known as "cleft sentences."

- 1) He is a boy.
- 2) It is he that is a boy.

Sentence (1) is normal and sentence (2) is cleft. In English, clefting involves a shift in focus or emphasis. In sentence (2) he-that-is-a-boy is the English approximation of an appellative, boy-he, which could be used the same way. When the appellative endings are used on a verbal (but not a fully finite verb), a new class of predicates is formed.

- 3) He is going to market.
- 4) It is he that is going to market.

Sentence (3) is normal and sentence (4) is cleft. The equivalent of he-that-is-going (to market) becomes as an appellative (to market) going-he.

In its use as a predicate, an appellative on a verbal can closely approximate a finite verb and, in fact, often functions as a full equivalent.

- 5) That happened.
- 6) That is what happened.

Sentences (5) and (6) differ in construction, but the semantics are almost the same.

Appellatives are commonly used in equational sentences. As in most Dravidian languages, they are used on adjectives (and adjectival participles) to form the equivalent of predicate adjectives.

- 7) That is the big one.
- 7') That is (the) big-it.

This can lead to distinctive usages. In the North Dravidian language Kurux, this construction parallels the use of the article in English.

- 8) *as kurux*. He is a Kurux.
- 9) *as kuruxas*. He is the Kurux (about whom I spoke).

When used on a verbal which is transformationally derived from the finite predicate of a sentence, the neuter appellative ending has the effect of turning an entire sentence into a single noun in another sentence. Such constructions are common and allow easy (and virtually limitless) embedding in languages with appellatives.

- 10) I saw him going to market.
- is equivalent to
- 10') I saw (he to market went)-it.

In Elamite this type of construction is elaborately developed with multiple embedding of appellatives.

Appellatives are basically pronominal in function. As such they regularly function as pronouns and in Dravidian languages replace third person pronouns. In this usage they are always combined with a deictic stem (often as a semantic dummy) to provide something for the appellative ending to be attached to. However, it is the appellative ending which provides the pronominal meaning. Appellatives are most common in the third person, and many Dravidian languages do not attest first and second person forms. However, these forms are attested widely and are highly developed in Old Tamil and Kui. Elamite has all persons in full use.

Appellatives will be discussed in more detail with the grammars of the respective languages. For a good set of examples in Dravidian, see Israel, 1975.

040. As far as possible, this work has been organized to proceed from the known to the unknown. Thus, in the grammatical summaries Dravidian, which is relatively well understood, is given first to provide a framework for Elamite.

A system of numbered sections has been used to allow ready cross reference. The usual linguistic subcategorization technique has been followed, i.e., section 121 is an elaboration of section 12 which is paralleled by section 13. Due to there being no more than nine subcategories for any section (except 422), the repetition of periods separating sections has been omitted. However, as a visual and locational aid, a period has been put in after three digits. This will usually locate a maximum of a major section and a minimum of a paragraph. The possibly two digit lexical entry numbers in section 422 are set off by a colon; 422:15, etc. Section 1.2.3. will be written as 123 unless it labels a single paragraph, in which case it is written with a period, 123. Section 1.2.3.4. will always be 123.4. Introductory sections commonly end in a zero. This omission of periods is not done for subchapters (2.2 History of Elam) or for tables (Table 1.10). Three appendices follow the main text and are referred to by Roman numerals.

I. COMPARATIVE DRAVIDIAN

100. Comparative Dravidian studies languished for many years after an early and substantial start with the Reverend Robert Caldwell's work (1856, 1875). In the first half of this century the only substantial work was done by K. V. Subbayya (1909, 1910–1911), the indefatigable L. V. Ramaswami Aiyar (see bibliography), T. Burrow (cf. 1968*b*), and Jules Bloch (1946, 1954). However, the period after 1950 has seen a renewed interest in the field by many scholars, and includes the publication of an etymological dictionary (Burrow and Emeneau, 1960, 1968). See Krishnamurti (1969*a*) and Sebeok (1969: pp. 309–408) for a detailed survey with bibliography of the period 1947–1968. The current period has seen a great deal of scholarly activity of which *Comparative Dravidian Phonology* (Zvelebil, 1970) and *Dravidian Verb Morphology* (Subrahmanyam, 1971) have been the most substantial. The literature of this field will be discussed in detail in the following sections.

101 Major Sources

101.0 I have kept to the current sources as much as possible in this work. However, two older sources retain substantive use. These are *A Comparative Grammar of the Dravidian or South Indian Family of Languages* (Caldwell, 1856, 1875, 1913, 1974) and *Muṇḍā and Dravidian Languages* (Grierson, 1906, Linguistic Survey of India 4). "Dravidian Languages," part two of *Linguistics in South Asia* (Sebeok, 1969, Current Trends in Linguistics 5, pp. 309–408) gives an invaluable summary and overview along with detailed bibliography. Other useful sources are the collections of articles republished as Emeneau, 1967 and Burrow, 1968*b*. *Language and Society in South Asia* (Shapiro and Schiffman, 1975) gives a valuable summary of both earlier and current work.

101.1 The major lexical source is emphatically *A Dravidian Etymological Dictionary* and its supplements (Burrow and Emeneau, 1960, 1968, 1972). A new edition is currently under way. Substantial works having an impact on all of comparative Dravidian include: *Telugu Verbal Bases* (Krishnamurti, 1961), *Dravidian Verb Morphology* (Subrahmanyam, 1971), and *Comparative Dravidian Morphology* (Zvelebil, 1977 and forthcoming). The most detailed bibliography is *A Bibliography of Dravidian Linguistics* (Agesthalingom and Sakthivel, 1973). Articles on comparative Dravidian will most commonly be found in the *International Journal of Dravidian Linguistics* and *Indian Linguistics*. Articles frequently appear in the *Indo-Iranian Journal* and the *Journal of the*

American Oriental Society. See the bibliography at the end for other, more specific, works on aspects of Dravidian linguistics.

1.1 THE DRAVIDIAN LANGUAGES

110.0 The modern Dravidian languages occupy a solid block of territory in the southern two-thirds of the Deccan peninsula roughly coterminous with the four southern states of the Republic of India. Numerous pockets of Dravidian speakers surrounded by Indo-Aryan and Munda speakers exist adjacent to this area, particularly in the Indian states of Madhya Pradesh, Orissa, and Maharashtra and in the northern and eastern sections of Sri Lanka. Outlying groups exist in the Chota Nagpur region of Bihar (Kurux), and in the Rajmahal Hills on the Ganges near the Bihar-Bengal border (Malto) and in the Brahui Hills of Pakistan around Kalat (Brahui). Recent migration has taken Dravidian speakers to all urban centers in India (Bombay in particular). Sizeable Tamil groups have emigrated to the Kandy region of Sri Lanka, to Malaysia and Singapore, and to South Africa. The total number of speakers is about 135,000,000, which makes it the world's fourth largest language family.¹ Two Dravidian languages, Telugu and Tamil, are among the top twenty languages with the most speakers in the world.

110.1 There are between twenty and thirty Dravidian languages currently known, with new discoveries still being made. Many of these are poorly known or have an ambiguous status between language and major dialect. Of these, four—Tamil, Kannada, Telugu, and Malayalam—are major, culturally dominant languages with long, well-established literary traditions. Three—Tulu, Kodagu, and Brahui—are nontribal and locally dominant, but not literary. Two—Gondi and Kurux—are spoken by large, widespread tribal groups. Kui, Kuwi, and Badaga are also spoken by sizeable populations. The rest tend to be spoken by rather small groups (less than one hundred thousand) of tribals, often in isolated areas. A recent discovery, Koraga, is spoken by a group of Un-

¹ More correctly the Dravidian family ranks in a *de facto* three-way tie for fourth. The three largest are clearly Indo-European, Sino-Tibetan, and greater Altaic (Altaic with Japanese and Korean). Dravidian, Malayo-Polynesian, and Afroasiatic (Semitic, Cushitic, Chadic, etc.) are within ten million speakers of one another. Given the vagaries and inconsistencies of census data and varying theories on what languages are to be included in a specific family, this is about as accurate as the figures are significant. In other words, the Dravidian family is a large and major one, but it is not one of the great superfamilies in terms of the number of speakers.

TABLE 1.1

The Dravidian Languages

Name	Alternates	Abbr.	Where Spoken (except as noted, in the Rep. of India)	Number of Speakers
Tamil	Tamil	Ta	Tamilnadu and urban; northern and eastern Sri Lanka, Malasia, Singapore, South Africa	40,000,000 (India 37,600,000)
Malayalam	Malayāḷam	Ma	Kerala, Madras city, and urban	22,000,000
Irula	Irula	Ir		5,300
Toda		To	Nilgiri mountains, Nilgiri Dist., Tamilnadu	800*
Kota		Ko		900*
Badaga		Bad		105,000
Kannada	Kannada	Ka	Karnataka (Mysore) and Urban	22,000,000
Kodagu	Koḍagu, Coorg	Kod	Kudagu (Coorg) Dist., Karnataka	72,000
Tulu	Tuḷu	Tu	South Kannara Dist., Karnataka and vicinity	1,150,000
Koraga		Kor	North Kannara Dist., Karnataka	45,000,000
Telugu		Te	Andhra Pradesh, Madras city, and urban	c. 2,000,000
Gondi	Gōṇḍi	Go	Madhya Pradesh, Maharashtra, and northern Andhra Pradesh	15,600
Konda	Koṇḍa, Kūbi	Kond		
Manda	Maṇḍa	Mand		
Pengo		Pe		
Kuvi	Kūvi, Khond	Kuvi	Koraput Dist., Orissa and vicinity	1,300*
Kui	Kūi, Kū'i	Kui		195,000
Gadaba	Gadba(Salur)	Ga		350,000(?)
Ollari	Gadba(Ollari)	Ga(Oll)		8,000*
Parji		Pa	Bastar Dist., Madhya Pradesh	800*
Kolami		Kol	Wardha Dist., Maharashtra	44,000
Naiki		Nk(Ch)	Chanda Dist., Maharashtra	69,000
Kurux	Kurukh, Oraon	Kur, Kx	Chota Nagpur region, Bihar	1,500*
Malto	Māḷto	Malt, Mt	Raj Mahal hills, Bihar and West Bengal	1,250,000
Brahui	Brāhūi	Br	Brahui Hills, Kalat, and Baluchistan in Pakistan and southern Afghanistan	90,000*
				c. 300,000*

* Figures not taken from the *Census of India 1971*, provisional figures, see Zvelebil, 1977: pp. 4-5 and Krishnamurti, 1969: pp. 309-310.

touchables, all of whom are bilingual in Kannada. This is a largely unexplained group. They have rarely been recorded in the census figures. See table 1.1.

111 An Overview of the Dravidian Languages

111.1 Tamil. Tamil is the best known and most widespread of the Dravidian languages. It is spoken as the major official language in Tamilnadu (Madras) State in India as well as neighboring regions and throughout urban India. It is also the first attested Dravidian language with inscriptions going back to the time of the Mauryan Empire (third century B.C.). Tamil literature began around the first century B.C. and reached an artistic climax in the first to third centuries A.D., during the so-called Sangam age, which produced some of the finest poetry of South Asia, and perhaps the world. Sangam (or Old) Tamil is very important for the linguist because of its age and its wealth of forms for comparative Dravidian. However, since the style valued terseness and indirection, it is often difficult to understand completely. It also has major implications in comparative literature since it is the only stylized literary technique in South Asia which is not Sanskrit based, or even directly influenced. The details of its isolated development can be seen to have significant import for South Asian prehistory; see Hart (1976) for some interesting implications on Dravidian movement and cultural centers.

Around the sixth century A.D., the language and content shifted to a more colloquial and religious (*bhakti*) style and Middle Tamil began. After rigorous development during the period of the medieval empires, this was codified by the *Nāṇṇūl* around the fourteenth century and literary Tamil became frozen in form, but not in usage. Literary Tamil is very purist in outlook and has tended to reject loanwords.

Thus, Tamil is a classic case of diglossia with separate colloquial and literary styles which differ in phonology, surface grammar, and vocabulary. They are not mutually comprehensible, but are, of course, closely related. Inscriptional evidence makes it clear that colloquial Tamil forms have existed at least from the ninth century A.D. and probably longer, i.e., diglossia is not a recent development in Tamil.

111.2 Malayalam. Malayalam is spoken in the state of Kerala and in Madras city. It began as a group of west coast dialects of Old Tamil and shared in the Sangam age. In the period of warfare with the (Tamil) Chola (*cōza*) Empire in the eleventh century these west coast dialects rejected (or lost) the literary standard and later formed a new written language based on colloquial speech. In the following centuries the in-

novated standard expanded, and by 1600 had become modern Malayalam. While there is a literary-colloquial continuum, Malayalam does not have diglossia. After 1750 the language began accepting wholesale loans from Sanskrit and today is the most Sanskritized language in India. Malayalam is noted for its immense lexicon and great precision in word use.

111.3 Kannada. Kannada (Cannarese) is the official language of the state of Karnataka (Mysore) in India. It has extremely deep zones of bilingualism with Marathi to the north and Telugu to the east. Old Kannada inscriptions began around A.D. 450. However, literature survives only from the ninth century. Middle Kannada, marked by a *bhakti*-influenced colloquialization of grammatical form, was in use from the thirteenth to the nineteenth centuries. It produced a literature both extensive and highly developed.

Kannada is an extreme example of diglossia. Furthermore, it has one of the more complex and divergent sets of colloquial dialects, both regionally and socially. This makes it difficult to decide if an aberrant variant like Badaga (see below) is a dialect or another language. Much work remains to be done on the interrelationship of Kannada dialects and the literary language.

111.4 Telugu. While there are Telugu inscriptions dating back as far as A.D. 633, the literature appears full blown only in the eleventh century A.D. This is due to the previous use of Prakrit and Sanskrit as official languages before A.D. 1000, and to accidents of preservation. Telugu, which has the most speakers of any Dravidian language, is found primarily in Andhra Pradesh. There are pockets of speakers throughout Karnataka and the Tamilnadu due to its spread under the Vijayanagar Empire. Telugu had an established diglossia until the present century, but is rapidly losing it as the old standard (Old Telugu) goes out of use. There have been considerable morphological changes from Old Telugu into the modern dialects. Furthermore, these dialects vary considerably from region to region.

111.5 Tulu and Kodagu. Two substantial languages are spoken in Karnataka besides Kannada. Tulu is spoken in the southern coastal region (South Kannara district) and neighboring northern Kerala. The language is not literary and its speakers use Kannada for writing. Split as well into two divergent dialects (languages?), Brahmin and NonBrahmin, Tulu's exact placement in the Dravidian family has long been a problem.

Kodagu is spoken in the hills up from the Tulu region (Coorg district) with Kannada on one side and

Malayalam on the other. Like Tulu it is a separate, locally dominant language which is nonliterary. Kannada is used for writing here, too. Tulu, Kodagu, and Kannada share many innovations and form an areal group. Koraga, the language of several groups of bilingual Untouchables in North Kannara district of coastal Karnataka also falls into this Karnatic region.

111.6 *The Tribal Dravidian Languages*

111.60 The use of the word "tribal," following South Asian usage, refers to a type of societal organization and does not imply a lack of sophistication or of economic well-being. It usually does imply a certain amount of isolation in the past, if not the present. In this context "tribal" contrasts with "caste" as one of the major organizing principles of South Asian society.

111.61 **The Nilgiris.** The Nilgiri plateau of extreme western Tamilnadu was almost totally isolated until the nineteenth century. It developed a unique cultural complex of its own with at least four Dravidian languages spoken there. These are Toda, Kota, Badaga, and Irula. Toda is highly aberrant from the areal norm. It is related to Kota, which more closely approximates the expected. Kota looks like a Dravidian language while Toda does not. Badaga is a major variant of Kannada, while Irula has only recently separated from the Tamil line.

111.62 **Gondi.** Gondi is perhaps best described as a group of dialects that never coalesced into the fifth major Dravidian language. These dialects and variants of Gondi are spoken over a wide area of southern and eastern Madhya Pradesh, eastern Maharashtra, and northern Andhra Pradesh. Except for Bastar District of Madhya Pradesh, where it is locally dominant, Gondi is restricted to isolated areas above one thousand meters surrounded by Hindi, Marathi, or Telugu speakers. It is tribal and noncohesive in spite of its large number of speakers.

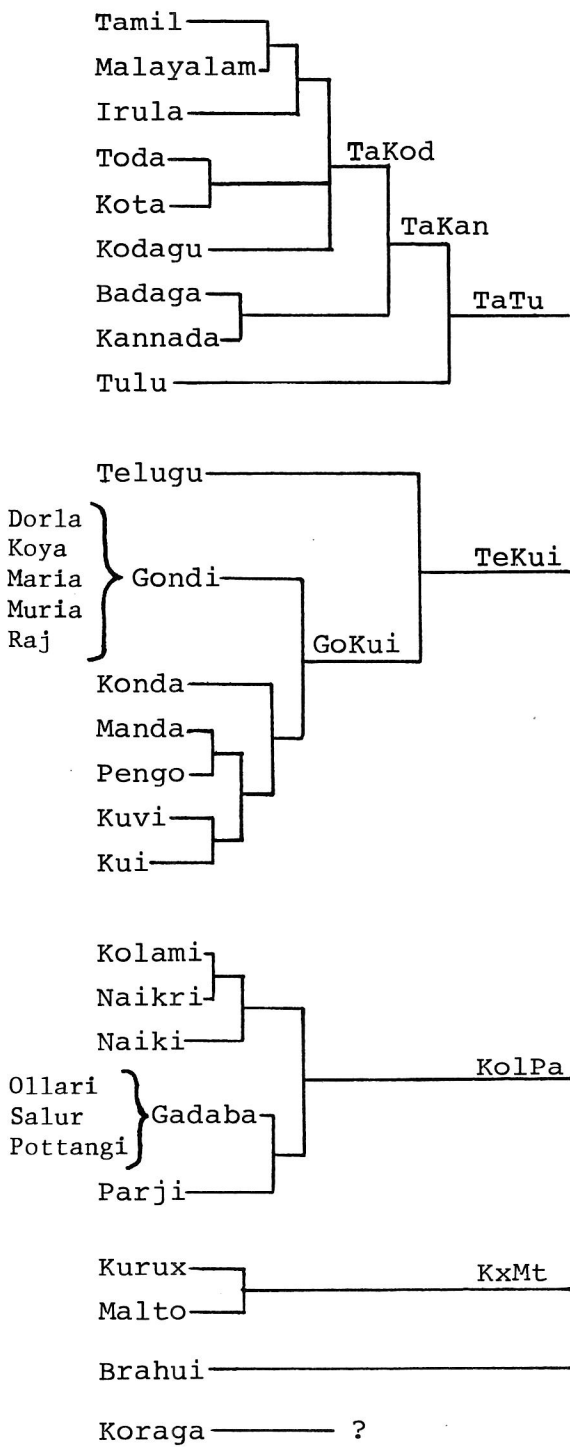
111.63 **Koraput District and other tribal languages.** The southern tail of Orissa State (Koraput District) is in the heart of tribal India. This district and the immediately adjacent areas contain a considerable number of Dravidian languages, many of which have been isolated until recently. Two closely related languages, Kui and Kuwi, have sizeable numbers of speakers. Others in the Koraput region include Konda (Kūbi), Manda, Pengo along with Gadaba (not to be confused with a Munda language of the same name) and its variants Ollari, Salur, and Pottangi. Parji is spoken in neighboring Bastar District of Madhya Pradesh. Kolami and the closely related Naiki are spoken in the hills of eastern Maharashtra.

111.64 **Kurux and Malto.** Kurux is spoken by a large number of speakers in the Chota Nagpur region of southern Bihar. It is surrounded by speakers of the Munda language family and is considerably influenced by Hindi. Malto is spoken in the Rajmahal Hills near the Ganges on the Bihar-West Bengal border and is surrounded by Munda Santali speakers. These two languages are closely related and by their own traditions came to the area from western India up the valley of the Narbada river.

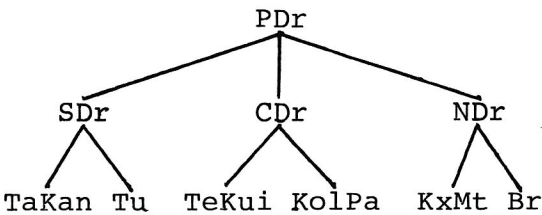
111.7 **Brahui.** Brahui is spoken by the Brahuīs who center on the Brahui Hills around Kalat in Pakistan, south of Quetta. They are largely nomadic and move with their flocks into the surrounding lowlands in the winter. The group is politically well organized as a tribal confederation under the Khan of Kalat, himself a Brahui. They are locally dominant with all men bilingual in Baluchi, and often trilingual as well in Urdu. Their isolated position has been of great interest and importance to comparative Dravidianists.

112 *Subgrouping*

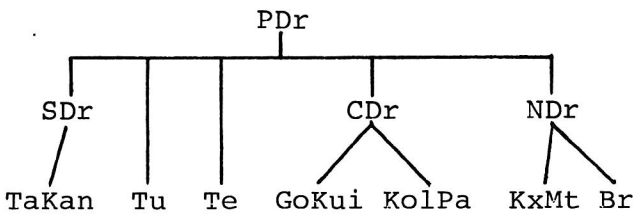
112.1 There was an early period of subgrouping exemplified by the writings of Caldwell (1858, 1875, 1913) and Konow (Grierson, 1906). A long period of only scattered comments on subgroupings, such as those of L. V. Ramaswami Aiyar and E. H. Tuttle, followed the earlier writings. Krishnamurti (1969a: pp. 325–326) and Shapiro and Schiffman (1975: pp. 117–137) have summarized this more recent period of the literature. Based in part on earlier work by Burrow (1943), the 1960's saw a gradual coalescing of a general theory of Dravidian subgrouping. In this view Proto-Dravidian broke into three major groups called North Dravidian (NDr.), Central Dravidian (CDr.), and South Dravidian (SDr.). The evidence for this is best laid out in the following works: Emeneau (1962) wrote the foundations of North Dravidian, and Krishnamurti (1961: pp. 236–271) established that Telugu, while greatly influenced by South Dravidian Tamil and Kannada, was genetically related to the Gondi-Kui subbranch of Central Dravidian. This structure was clarified and made explicit by Subrahmanyam (1969b). Though its core had always been assumed, Emeneau (1967b) established the clear structure of South Dravidian. Thus, except for difficult problems like the position of Tulu, which Subrahmanyam (1968) had argued was South Dravidian, but about which Krishnamurti still had reservations, the late 1960's and early 1970's saw the general acceptance of the tripartite hypothesis. This is presented in Krishnamurti (1969a), Andronov



A. (Krishnamurti 1969a, Subrahmanyam 1971)



B. (Andronov 1970, Zvelebil 1970)



C. (Krishnamurti 1974, 1978)

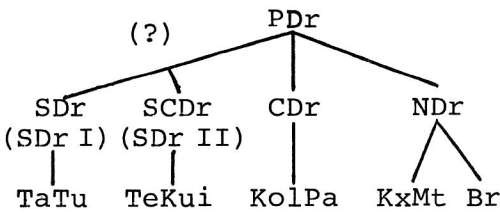


FIG. 1

(1970), Zvelebil (1970), and Subrahmanyam (1971). Variants are given in figure 1, trees A and B.

112.2 As soon as the tripartite hypothesis gained general acceptance, major flaws appeared in it. Succinctly stated, the problem is in distinguishing the shared innovations, which are valid grounds for grouping, from the shared retentions, which are not. Furthermore, mounting evidence from areal linguistics (cf. Southworth and Apte, 1974: pp. 1–18, 201–223) made it clear that similar arguments and evidence could be used across language family lines. The labels North, Central, and South represent only areal assimilations. For some of the tripartite groups the critical evidence (the unique shared innovation) is minuscule. As Emeneau (1962) makes clear, the North Dravidian hypothesis depends upon a single phonological shift ($*k > x$). Central Dravidian has two clearly cohesive groups, Gondi-Kui (along with Telugu) and Kolami-Parji. However, proving that these two groups are related depends entirely on the model for Proto-Dravidian that is used; i.e., on a model which labels the innovations and the retentions. South Dravidian has always been a secure grouping and Emeneau (1967*b*) takes this beyond doubt. However, even he is ambivalent on the exact internal relationships (the position of Toda-Kota is a problem) and he does not handle Tulu at all, which if related is only distantly so. See Southworth (1976) for a discussion of all these problems and a somewhat overly dismal view of the situation. As is clear in examples like Krishnamurti (1974, 1978), new thought is going into this matter of grouping; see figure 1, tree C.

112.3 What can be said reliably about subgrouping in Dravidian at present? It turns out that a great deal can be said once the tripartite labels are discarded. The groupings immediately under that level are intact and quite secure, often obviously so (see fig. 1).

Tamil, Malayalam, Irula, Toda-Kota, and Kodagu form a tightly structured group, although there is some doubt as to the internal structure (is Kodagu closer to Tamil than Toda-Kota or not?). Tamil-Kodagu (TaKod.) is clearly, but more distantly, related to Kannada and its major variant (dialect? separate language?) Badaga. While the evidence is arguable, it is generally believed (and Krishnamurti, 1978 finally concurs) that Tulu is related, but at a considerable distance.

Similarly Konda, Manda, Pengo, Kuwi, and Kui form a tight group, but with some question as to the internal ordering. Konda-Kui (KoKui.) is clearly related to Gondi, which itself is more of a dialect

grouping than a single language. Gondi-Kui (GoKui.) is distantly related to Telugu, forming Telugu-Kui (TeKui.). This group is noted for its metathesizing (apical displacement) and has been recently reinvestigated by Krishnamurti (1978).

Kolami, its dialect Naikri, and Naiki (of Chanda) are closely related as are Parji and Gadaba (or Gadba) and its variants. These two pairs clearly go together to form Kolami-Parji (KolPa.), a major subgroup. Kurux (Oraon) and Malto are closely related, forming the group Kurux-Malto (KxMt.). In this view, Brahui is an isolate as is the recently discovered Koraga, which has parallels with Kurux-Malto, but is a true enigma at the moment. Thus, we can safely talk of four major subgroupings—Tamil-Tulu (TaTu.), Telugu-Kui, Kolami-Parji, and Kurux-Malto, along with Brahui and Koraga as isolates, for the time being.

112.4 It is premature to attempt any higher structuring of relationships in Dravidian. Except for the observation that Kurux-Malto and Brahui have special significance for the validity of a claim of status as Proto-Dravidian, the remaining structure is totally muddled by areal considerations. The status of Proto-Dravidian obviously applies to items found in all branches. It is secure if reflexes are attested in Kurux-Malto or Brahui and somewhere else in Dravidian. It has generally been granted to etyma attested in any two noncontiguous major groups. With contiguous groups Proto-Dravidian status has been granted only where it is clearly not a loanword. This is particularly the case with regard to Telugu and Tamil-Tulu, for which loans are numerous and very convoluted.

112.5 The tripartite designations: South, Central, and North Dravidian, have been handled somewhat ambivalently. They are both very well established in the literature and describe a level of reality. Central Dravidian may be an areal rather than genetic grouping, but it is coherent and useable nonetheless. These groupings have been retained in general discussion, and even in genetic considerations, have been kept as a convenient shorthand. Central Dravidian indicates that a feature is shared by Telugu-Kui and Kolami-Parji (as similarly North Dravidian is used for Kurux-Malto and Brahui) without any ultimate claim being made for this observation. South Dravidian is normally used as the synonym for Tamil-Kannada (and Tulu) and there is no problem there. In crucial discussions the exact grouping will be specified.

1.2 COMPARATIVE DRAVIDIAN PHONOLOGY

120. Of all the aspects of comparative Dravidian grammar, the phonology is the most studied and the

best known. We can talk about Proto-Dravidian phonology with considerable assurance. There is detail, consistency, and pattern. However, this pleasant picture applies strictly only to the initial consonant (C) and vowel (V), incidentally to the following consonant, and then usually breaks down entirely. This is due to Dravidian's universal pattern of an initial root (normally CVC) coupled with the almost universal stress on the initial syllable of a word. Beyond this first syllable the derivational system, morphological operations, and complex phonological patterning of word stems come increasingly into play. It is no longer simply a matter of phonology, but of phonology highly conditioned and controlled by morphology. As a result, the reconstruction of an entire word in Proto-Dravidian or one of its major subgroupings is either trivially easy or virtually impossible at the present. This has been best expressed by Bh. Krishnamurti (1976: pp. 141–142, section 1.2):

The Dravidian etymological data is [*sic*] not of uniform quality and quantity for all the languages. The entries in *DED(S)* give us cognates which are drawn from the available dictionaries of 23 or so languages. It is phonologically more reliable for the southern languages than for others. For many items we have more than one variant cited without any clues for such variation, because such information is missing in the source dictionaries. These variants apparently represent different regional and social dialects and also different periods of history in the case of the literary languages. Even in the case of the non-literary languages there is a great deal of unidentified lexical variation, sometimes dialectal and sometimes orthographic depending on different authors' ability to hear and record. Qualitatively the data on the various dialects of Gondi, Kuvi and Malto is [*sic*] the least reliable. Owing to this limitation on the data, correspondences of phonemes are never so clear and regular. A Dravidian scholar faces the problem of sorting out such variation into what is specific to individual languages and what represents variation at the reconstructed stage. For instance, the following etymological group meaning 'hare' given in *DED(S)* 4071 does not lend itself to a single reconstruction:

SDr I: Ta. *muyal*, *mucal*, Ma. *muyal*, Ko. *molm*, To. *mūṣ*, Ka. *mola*, *mala*, Koḍ. *mona*, Tu. *muyeru*, *mug(g)eru*, *mola*.

SDr II: Go. *malōl*, Koṇḍa (BB) *morol*, Kui *mṛāḍu*, Kuvi (F) *mṛālū*, (S) *mṛālu*, Pe. *mṛōl*.

CDr: Kol. *mīte*, Nk. *mīte*, Pa. *mūda*, Oll. *munde*, Gad. *mūnde*.

NDr: Kur. *muñyā*, Malt. *muñye*, Br. *murū*.

For SDr I **muc-al* accounts for Ta. Ma. To.; Ka. Ko. Koḍ. require **mol-am* as the underlying form. These two can be related by adding *-am* suffix to the syncopated **mol* < **muyal*. Tu. *muyeru* < *muyal*, *mugeru* being a dialect

variant of *muyeru* with *-y- > -g-*. *mola* looks like a borrowing from Ka. Go. *mol-ol* looks to **mol+ol*; but the rest of the SDr II languages require **mor-al* or *moz-al*. In NDr, Br. requires **muz-u* or **mur-u*, but Kur. and Malt. look to *mun-c*. CDr require **muy-nt/ntt*, with loss of *y* in Pa. and Ga. This is one of the cases of extreme incongruity in correspondences, but still are grouped together in *DED(S)* on account of their seeming phonetic-semantic similarity. The obvious explanation for so many reconstructed forms is that they reflect dialect variation within Proto-Dravidian itself. But there is no other etymological group reflecting similar differences in reconstructed forms for the same sets of languages to support the above statement. Of course, the alternative is to say that the reconstructed forms are not interrelated, i.e., the items are not all cognate and should not be brought under one entry in the dictionary. A counter example to the above is the group of words meaning 'worm, insect' (*DED(S)* 3537), which yield a single reconstruction for PDr, as **puz-u(wu)*.

SDr I: Ta. Ma. Ka. *pūzu*, To. *puf*, Ko. *pū*, Koḍ. *pulu*, Tu. *puru*, *puri*.

SDr II: Te. *pruwvu* (<**puz-w-*), Go. *purī*, Kui *piru*, *priu* (pl. *prika*), Kui (F) *priyūli* (pl. *prika*), (S) *pliguli*, Koṇḍa *pirvu* (pl. *pirku*), Pe. *pri* (pl. *prika*).

CDr: Kol., Nk. *pur(r)e*, Pa. *puṛut*, Gad. *puḍut*.

NDr: Kur. *pocgō*, Malt. *posgo*, Br. *pū*.

The only problem here is the dissimilatory vowel change in the Koṇḍa Kui-Kuvi-Pengo subgroup, i.e., **piz-(u)w-*; metathesis and vowel contraction results in initial CC- in all SDr II languages, except in Gondi. Between these two extremes, one gets correspondences with different degrees of unpatterned phonemic variation in different languages.

This situation is simply a description of the state of the art. It has taken a great deal of work to get this far and only recently have major gaps in the phonology of the initial syllable been closed, for example, Subrahmanyam's (1977a: pp. 178–181) work on laterals in Toda and Krishnamurti's (1975, 1976: pp. 143–144) studies of vowel quality in Parji.

The description of comparative Dravidian phonology is concerned almost completely with the initial CVC segment. However, this is almost completely coterminous with the root and is the syllable of pre-eminent importance for Dravidian. A great deal can be said about it.

Dravidian phonology is extremely fortunate in that the first attested and most studied Dravidian language, Tamil, has an extremely conservative phonology which for all practical purposes is identical with Proto-Dravidian phonology.² Most comparative

² There is, of course, an inherent danger in such a viewpoint. There is a tendency to immediately reject any variance with the model provided by Tamil, such as the possibility of PDr **H*. Also,

Dravidian phonology is simple, straightforward, and has been known for many years; the list of correspondences in the *Dravidian Etymological Dictionary* (*DED*; Burrow and Emeneau, 1960) is noncontroversial. The normal pattern is to have proto-phoneme *X which is attested in twenty languages as X, in two as both X and Y, and in one as Z. The work over the years has been in explaining the why of Y and Z, not the inherent regularity of the pattern. That tends to be obvious. The best overall detailed statement is in *Comparative Dravidian Phonology* (Zvelebil, 1970) and its reviews (Emeneau, 1973; Krishnamurti, 1976).

121 Proto-Dravidian Phonemics

121.0 What emerges as Proto-Dravidian phonology, attested in detail in Tamil, Malayalam, Konda, and others, is highly skewed, unusual, and in many ways unique. Its more blatant peculiarities include a world maximum on the number of apical stop phonemes and the total lack of sibilants, even [s].³ There is no contrastive voicing or aspiration.

121.1 **Lax-tense contrast.** What is used instead is a pervasive lax-tense contrast which has phonetic manifestations in manner of articulation, gemination, voicing, vowel quality, and length. Tense consonant phonemes are voiceless (when obstruents) and usually geminate (always for sonorants). Tense vowels are long with clear definite qualities. Lax consonant phonemes will be voiced according to environment, weakly articulated (fricative, tapped, trilled), and never geminate. Lax vowels are short with a variable quality.

Tenseness (i.e., the tense-lax contrast) is highly patterned, and in general, two tense phonemes will not follow one another without a morpheme boundary being involved. In particular, vowel length is highly determined by consonant tenseness and *vice versa*. While vowel length (i.e., vowel tenseness) is phonemic for Proto-Dravidian and all Dravidian languages, ninety per cent of it is predictable from word boundaries and consonant length. In other words, in Proto-Dravidian vowel length is almost completely predictable from consonant length or consonant length

is almost completely predictable from vowel length, but you must have one or the other. In Pre-Dravidian one would expect either vowel or consonant length to become allophonic and the other to remain contrastive. Proto-Dravidian looks like a language that has just lost the conditioned patterning in its tenseness and hence acquired a tenseness contrast.

It should be stressed that while vowels are written with a length contrast (macron) and consonants with a gemination contrast,⁴ it is the same phonological process (precise versus sloppy articulation) and that consonants are not necessarily truly phonetically geminate when they are so written. In many cases, tense consonants (written double) occur in environments where phonetic gemination would be impossible or highly unlikely; *ṇkk*, *lkk*, etc.

121.2 **Vowels.** Proto-Dravidian has five vowel phonemes

i	u
e	o
a	

which occur both lax and tense (i.e., short and long). The two diphthongs, *ai* and *au*, used in the *DED*, are in reality *ay* and *av* [aw] and only reflect orthographic influences. There are no major problems with the reflexes of the vowel in Dravidian (see *DED*: pp. xii–xiii and Zvelebil, 1970: p. 73 for charts of correspondences). Most Dravidian languages strictly maintain the vowels in all positions. Typical pronunciations would be *i* [i], *ī* [i:], *e* [ɛ], *ē* [ɛ:], *a* [a], *ā* [a:] *o* [o:], *ō* [o:], *u* [u], *ū* [u:], following South Asian areal practice.

121.21 A more complex situation is the epenthetic vowel, PDr *ə (schwa). This is most clearly attested from South Dravidian where it is attested as [u]/[i] (Tamil and some Kannada dialects) or [ə] (Malayalam). Elsewhere it is dropped or falls together with other vowels (usually to /u/ or /i/ phonetically, but is maintained in the phonology by its dropping regularly (Kannada) or vowel harmony (Telugu); see Bright, 1975. In this work schwa (ə) will be used for the South

the influence of Tamil tends to carry over excessively into morphology, where it is not an enlightening model. There is a tradition of seeing Proto-Dravidian as just like Tamil only more so.

³ See discussion in Chomsky and Halle, 1968: p. 413. Also see Ladefoged (1971: pp. 38–40 and table 22) for comments on Malayalam and its system of six stops, which applies to Proto-Dravidian equally well. The comments in Ladefoged (1971: pp. 100–102) on Chomsky and Halle's (1968: pp. 312–313) description of retroflexes make it clear that this type of apical contrast is quite unusual.

⁴ There are two schools of thought on Dravidian tenseness notation. One (see Emeneau, 1967b: p. 372, 1970a: p. 145) handles it as pseudovoicing (lax *d*, tense *t*) and tends to better represent the phonetic reality. Such notation can reduce morphology to complex impenetrability (cf. Emeneau, 1967b: pp. 394–408 on the verbs of Toda and Kota). The other (see Zvelebil, 1970) follows traditional orthographies, handles tenseness as pseudogemination (lax *t*, tense *tt*), and tends to make for complex phonological statements, but relatively transparent morphology. The two are formally interchangeable, but not on a one-for-one basis. It is important only to know which system is being used. For this work the gemination model is clearly the more advantageous.

Dravidian epenthetic vowel (except for individual language citations), variable vowels in harmony, and any vowel whose quality is of a similar nature. For Proto-Dravidian it seems that it was used to prevent a word final obstruent, but it may very well have been optional. It is not, properly speaking, a part of the reconstruction since it is added and dropped by rule in the attested languages. It merely indicates that such variation exists and was possibly there at the protostage.

121.3 **Consonants.** Dravidian has a single series of obstruents differing by position: labial *p*, dental *t*, alveolar *r*, retroflex *ɽ*, palatal affricate *c* [tʃ], and velar *k*. It has three nasals: bilabial *m*, (denti-)alveolar *n*, and retroflex *ɳ* along with a possible fourth *ṇ* (ṇ).⁵ There are four liquids: alveolar lateral *l*, retroflex lateral *ɭ*, tap *r*, and a retroflex approximant *z*,⁶ along with two semivowels *y* and *v*. The *v* phoneme includes all voiced labial fricatives and semivowels, i.e., [w, v, β] as allophones.

Dravidian lax obstruents (also called plosives, abbreviated P) are always weakened intervocalically. The apicals (alveolars and retroflexes) weaken to taps or trills, thus alveolar *r* intervocalically is *r̥* [r, r̥]⁷ and retroflex *ɽ* is [ɽ] or [ɽ̥]. They do not occur initially. Nonapicals normally become nonstrident voiced fricatives: *k* [ɣ], *c* [dʒ, ʃ], *t* [ð], and *p* [**β* > *v*]. After nasals (abbreviated N), lax obstruents are attested as homorganic voiced stops. Initially in modern Tamil and Malayalam they are nonaspirate and voiceless. Tense obstruents (abbreviated PP) are always voiceless and are geminated except when in clusters. Sonorants (also called liquids, abbreviated L) use gemination and length to maintain tense-lax contrasts. Only in unusual instances, like Toda, do they ever devoice.

Only sonorants may occur finally. This, in fact, is restricted to final *m*, *n*, *ɳ*, *l*, *ɭ*, *r*, *z*, *y*. The bilabial *-v* is very rare in this position since it usually is a mutated obstruent (**p* or **k*) and patterns accordingly. No obstruents can occur finally. When they otherwise would, an epenthetic vowel is added. The “enuncia-

tive vowel” (symbolized by ə) is not part of the word and will drop if the possibility arises. Sometimes it is difficult to tell a final stem vowel from an epenthetic one; contrast Ta *naṭu* (*naṭu*) ‘center’ with *naṭu* (*naṭə*) ‘to plant’.

121.31 Due to their unitary nature, it is traditional and convenient to discuss basic consonant clusters, i.e., nasal-obstruents (NP) and geminates (CC), as simplex entities and to give them in full details in phonemic tables; see table 1.2. Their patterns of distribution are mostly simple and self-explanatory. There are, however, a few dubious points in the system which are discussed below. The numbers refer to the superscripts in table 1.2.

(1) Intervocalic **p* > *-v* is almost universal in Dravidian. Intervocalic *-p* is maintained only in a very few words; cf. OTa *tapu* ‘to perish’. Its reflexes are seen mainly in *-pp*- versus *-v*- contrasts. Some Dravidianists (Emeneau, Krishnamurti) do not reconstruct it for the protostage, but it seems best to keep it. The contrast is maintained to help separate *v* (<**p*) from a possible PDr **-v*- and from other shifts; see Zvelebil, 1970: pp. 88–89. Note that there are a few indications (see section 422: 72, appendix II, B6–7) of initial *p*-/*v*- alternations in Dravidian.

(2) While definitely in contrast, *-m*- and *-v*- are in widespread alternation in the southern languages. Doublets exist in many languages to such a degree that it is “difficult to ascertain which of the two is historically original” (Krishnamurti, 1961: p. 43); see also Zvelebil, 1970: pp. 125–128. This confusion continues actively today in Tamil dialects: *micai*, *vica* ‘moustache’; *vāṇam*, *māṇam* ‘sky’.

(3) The nasal *n* is attested as dental when initial and alveolar everywhere else. Exceptions are dental clusters (*nt*, **ntt*) where *n* is really an unspecified nasal (or *m*?) and a few forms are attested in Old Tamil where dental *n* is intervocalic (OTa *anupavam* ‘feeling’, *varunar* ‘one who comes’) or final (OTa *verin*, *ven* ‘back’ and *porun* ‘to imitate’). The case of final dental *n* seems to be a variant of final *-m*. This is particularly the case for the noun formative *-aN*; see Zvelebil, 1970: p. 129. For further discussion see also Subramoniam, 1968 and Shanmugam, 1972.

(4) Initial *ṇ*- is rare and tends to alternate with initial *y*- and initial *n*-. There are enough examples to give it provisional status, but in any case it seems somewhat peripheral to the main patterns in the phonology. It is the only consonant phoneme not occurring in the second syllable. Initial *y*- is very rare (10 out of over 5400 entries in the *DED* and *DEDS*) and occurs only before *-a* and *-ā*. Probably only its use in the first

⁵ I split symbolism between two quite distinct usages: the initial phoneme (ṇ-/ and the assimilated palatal nasal /ṇ/. Protophonemic status goes only to **ṇ*-.

⁶ This sound, which is very close to a midwestern American *r*[ɻ] (actually a retroflex approximant), is a notational nightmare. It has been indicated by *z*, *zh*, *r̥* (*DED*), *r̥* (Zvelebil, 1970), among others. I prefer *z* simply to avoid possible confusion. The diacritic helps to indicate that it is an arbitrary symbol.

⁷ Alveolar *l̥*, which is [r̥] intervocalically, must not be confused with /r/, which functions as a liquid. They are phonetically similar in all languages which contrast them, and they have commonly fallen together.

TABLE 1.2

Proto-Dravidian Phonemes and their Distribution

	Coronal							
		Apical						
	Labial	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal	
#PV	p-	t-			c-	k-		
VPV	(-p-) ¹	-t-	- <u>r</u> -	-ṭ-	-c-	-k-		
VPPV	-pp-	-tt-	- <u>rr</u> -	-ṭṭ-	-cc-	-kk-		
VNPV	-mp-	-nt-	- <u>nr</u> -	-ṇṭ-	-ñc-	-ṅk-		
VNPPV	-mpp-	-ntt-	- <u>nrr</u> -	-ṇṭṭ-	-ñcc-	-ṅkk-		
VP#	-pə	-tə	- <u>r</u> ə	-ṭə	-cə	-kə		
#NV	m- ²	n-			ɲ-(?) ⁴			
VNV	-m-	(-n-) ³	- <u>n</u> -	-ṇ-				
VNNV	-mm-		- <u>nn</u> -	-ṇṇ-				
VNC			- <u>n</u>	-ṇ				
VN#	-m	(-n) ³	- <u>n</u>	-ṇ				
#LV	v- ²				y- ⁴		(H-) ⁵	
VLV	(-v-) ¹		-l-	-ḷ-	-y-		(-H-) ⁵	
VLLV	-vv-		-ll-	-ḷḷ-	-yy-			
VLC			-l	-ḷ	-y		(-H) ⁵	
VL#	(-v) ⁵		-l	-ḷ	-y		(-H) ⁵	
VRV			-r-	-ṛ-				
VR(N)C			-r	-ṛ	-y-			
VR#			-r	-ṛ				
ĩ	i	e	a	o	u	ə		
ī	ī	ē	ā	ō	ū			

person pronouns and the interrogative have kept it in existence at all. See Zvelebil, 1970: pp. 135–139, 159–160.

(5) Following Krishnamurti (1963: pp. 557–558), I have reconstructed PDr **H* to handle a set of problems in attestations in Dravidian. Primarily these revolve around the deictic-interrogatives (see appendix II, A3–6), which have a general formula of *CVH*, the irregular verb for ‘to die’, and the general attestation of *h* in Brahui. It is not involved in the *h* found in Tulu and Kannada or in central Dravidian. These clearly have other origins. Deictics in Dravidian have a complex fusion with following morphemes, see section 131.41. This has been analyzed as a final-*v* and is so attested in Old Tamil. However, before *t* Old Tamil has *āytam* (*k*), i.e., *aktu* ‘(that) it’, which is pronounced today as a weak [x]. The original pronunciation, though, is open to considerable doubt. For these forms, however, an underlying **H* solves many problems. A clearer case is the verb for ‘to die’ PDr **caH-*. In South Dravidian it is an archirregular showing variant stems *cā/ca(ce)*. It is attested in Brahui as *kahing* (<**caH-*) with the *h* clearly present. A hypothesis involving PDr **H* does provide some real solutions; see Krishnamurti, 1963: pp. 557–558 for discussion and details. However, **H* has disappeared from almost all Dravidian languages and was never common.

(6) As opposed to all other phonemes, *r* and *z* do not occur in geminated form. They are quite common as the first members of consonant clusters in derivative situations, while the phoneme *y* patterns very similarly. The phoneme **z* has very complex reflexes; see Krishnamurti, 1958*b*; Burrow, 1968*a*; Emeneau, 1971; and Zvelebil, 1970: pp. 147–155. This analysis has gone for overdifferentiation in points of doubt, since this is easiest to correct. All protophonemes in parentheses, except *-v-*, could easily be removed.

121.32 Consonant clusters are highly restricted. Beyond the patterned clusters of nasal plus obstruent (NP, NPP) and the geminates (CC), the only clusters allowed consist of the liquids (L) *l*, *l*, and *y* and (R) *r*, *z* with any obstruent or obstruent cluster; *LP*, *RP*, *LPP*, *RPP*, *RNP*. Any nonhomorganic cluster implies a morpheme boundary. These clusters (*P₁P₂*) are unstable and tend to simplify to geminates (*P₂P₂*).⁸

⁸ Nonhomorganic obstruent clusters usually simplify regressively, i.e., to *P₂P₂*. In some specific environments, such as after first syllable (stressed) short vowels, they will simplify progressively to *P₁P₁*; Ta *pak-* ‘be split, divided’ + *t* ‘past tense marker’ → *pakk-*. Nonhomorganic clusters are possible as long as the first is a liquid and the second is noncoronal, i.e., not a ‘*r*.’

All of these phonemes and clusters are well attested except for the series NPP, which is reconstructed. Kumaraswami Raja (1969) provided the analysis that explained seemingly random variation in certain etyma. For example, Tamil maintained **NP* as NP but changed **NPP* to PP giving rise to numerous NP:PP alternations. Kannada, on the other hand, changed **NP* to NB (*B* = contrastively voiced obstruent) and **NPP* to **NP*, giving rise to a voicing contrast. Hence, such variations as Ka *aṇunku* ‘to depress, destroy’: Ta *aṇukku* ‘id.’ were explained by the reconstructed **NPP*. Contrastive voicing has developed elsewhere in Dravidian due to loan words or to special phonological classes such as metathesis in Telugu, where *ṼzṼ > dV*; Te *ḍiggu* ‘to descend’: Ta *ḍi* ‘id.’, *ḍukku* ‘to fall down’. These changes in no way affect the situation in Proto-Dravidian.

This, of course, is only an outline of comparative Dravidian phonology. There are numerous special cases and anomalies which have not been discussed here. The reader is referred to K. V. Zvelebil, *Comparative Dravidian Phonology* (1970) for a detailed discussion of the matters, charts, and graphs of specific problems. Certain major developments are discussed in section 311.41 with regard to the lexical data.

122 Dravidian Morphophonemics

122.0 When the phonologies of related etyma are compared, strong phonological patterns appear. In particular, the structure of the root and stem emerge. The Dravidian root is generally recognized as being monosyllabic of the form (C)V(C). However, South Dravidian shows evidence for a few verbs with bisyllabic roots, (C)VCV.⁹ Except for etymologies, the functioning level is that of the stem, which may be a bare root, but typically has an augment of *-V(C(C))* added to the root. This, in turn, may be followed by additional secondary augments of the form *-(V)C(C)*. Thus, the normal Dravidian root is monosyllabic and biconsonantal, CVC, while the typical stem may be CVC, but is commonly bisyllabic and triconsonantal, CVCVC. This distinction is crucial in Dravidian morphology. The form of the augments is well known, but with few exceptions, it has not been possible to give them any specific meaning. See sections 131.1 for nouns and 132.1 for verbs.

⁹ A few verbs of the form (C)VCa seem to have the *a* as part of the verb root. Specifically, they always have this vowel and no other and contrast with similar monosyllabic roots. Examples include Ta *kala-* ‘to mix’, cf. *kal-* ‘to learn’ and *naṭa-* ‘to walk, happen’, cf. *naṭ-* ‘to plant’.

122.1 The root has the general form of (C)V(C), or more specifically ${}^1C_0 {}^1V_1 {}^2C_0$.¹⁰ However, due to tense-lax patterning, only three of the possible variants actually exist: (A) ${}^1C_0 {}^1V_1 {}^2C_1$,¹¹ (B) ${}^1C_0 {}^1V_2 {}^2C_0$, (C) ${}^1C_0 {}^1V_1 {}^2C_2$. When the primary augments, $+{}^2V_1 {}^3C_0$, are added to these roots, the major morphophonemic patterns of alternations for the Dravidian languages emerge; see table 1.3. When added to the variant A, the process is straightforward, ${}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1 {}^3C_0 \rightarrow {}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1 {}^3C_0$. This is the simplest form of derivation in the morphophonology and in many ways is the model for all derivation; Ta *tak(u)* 'to be fit, proper'; *takai* 'fitness, grace, beauty; to be beautiful'.

122.11 **Krishnamurti's rule.** Bh. Krishnamurti (1955, 1961: pp. 121–123) formulated a basic morphophonemic alternation in derived forms which can be symbolized as follows:

$${}^1C_0 {}^1V_2 {}^2C_1 : {}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1.$$

In terms of the format used here, this may be generalized as the derivation with the primary augment on a type B root with a final consonant, i.e., ${}^1C_0 {}^1V_2 {}^2C_1 \rightleftharpoons {}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1 {}^3C_0$. Examples are widespread: Ta *kār-* 'to be pungent, salty, or brackish'; *kari-* 'to be salty to the taste'; *ār-* 'to shout, roar'; *ararru-* 'to lament, shout'.

122.111 This alternation is also found in archaic morphology. For example, the personal pronouns have their nominative base, which has no augment, with a long vowel and their oblique base (which has an augment) with a short vowel: PDr **tān* 'oneself' *nom.*, *obl. *tan*; see section 131.3 for details. Similarly, adjective-like forms (see section 130.31) and numerals (section 131.5) regularly alternate between monosyllabic forms with a long vowel when a vowel follows and bisyllabic forms when a consonant follows; Ta *ōr/oru* 'one', *īr/liru* 'two', *cīr/ciru* 'small', etc.

122.12 **Emeneau's rule.**¹² M. B. Emeneau (1970b,

pp. 101–103; after Krishnamurti, 1961: pp. 81–86) explicitly states the related rule which has the form:

$${}^1C_0 {}^1V_1 {}^2C_2 : {}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1.$$

In terms of the format used here, this is a type C root followed by a derivational augment, ${}^1C_0 {}^1V_1 {}^2C_2 \rightleftharpoons {}^1C_0 {}^1V_1 {}^2C_1 + {}^2V_1 {}^3C_0$. In this alternation 2C in the stem is always lax (2C_1) and frequently weakened.¹³ If 2C_2 is geminate, then it will be single. Examples include: Ta *kīllu* 'to pinch, pluck' : *kīlai* 'to dig up', *kappu* 'to overspread' : *kavi* 'to cover'; Ta *muccu* 'to cover' : Te *musūgu* 'to cover'.

122.13 **Zvelebil's rule.** Kamil Zvelebil (1967: pp. 87–95, 1970: pp. 185–187) has discussed a third morphophonological relationship, which is not clearly derivational:

$${}^1C_0 {}^1V_1 {}^2C_2 : {}^1C_0 {}^1V_2 {}^2C_1.$$

Put in terms of this argument, it says that roots of type B and C co-occur in etymologically related items; Ta *meṭṭu* 'mound', *mēṭu* 'height, hillock'. It also occurs in some morphology; Tamil personal pronouns, *yāṇ* 'I', *eṇṇ-ai* 'me (accusative)'.

122.14 **Rao's observations.** G. Sambasiva Rao (1973a: pp. 251–257) indicates a group of obviously related words where the noun has a long vowel and the verb has a short one:

$$\text{noun } {}^1C_0 {}^1V_2 {}^2C_1 : \text{verb } {}^1C_0 {}^1V_1 {}^2C_1 \quad ({}^2C = \text{apical}).$$

Examples include: Ta *īṭu* 'to put' : *īṭu* 'placing', *keṭu* 'to spoil' : *kēṭu* 'ruin', *paṭu* 'to fall' : *pāṭu* 'a fall'. Rao (1973b) extrapolates from this a general, well documented argument that Krishnamurti's, Emeneau's, and Zvelebil's rules apply in noun-noun and verb-verb derivation, but not necessarily in verb-noun derivation. In other words, morphophonemic variations are controlled by form-class. This observation has set off one of the most vituperative exchanges in comparative Dravidian. Subrahmanyam (1975) replied to Rao, Rao (1977: pp. 86–94) counterreplied, and Subrahmanyam (1977b: pp. 227–233) again challenged his arguments. See B. Gopinathan Nair (1979) for a recent attempt at keeping score. While Rao is

¹⁰ In this notation, V is any vocalic and C is any nonvocalic. In symbolism of the form xC_m , x is the syllable (ideal CV sequences starting from the beginning of the form), m is the minimum number of possible occurrences, and n is the maximum number of possible occurrences. Thus, C_0^n is equivalent to (C(C)), i.e., \emptyset , C, or CC. For vowels, V_1 is short, V_2 is long, and V_3 is variable. See Chomsky and Halle (1968: pp. 61–62) for the details of this formalism. It is equivalent to parentheses and greatly simplifies the indication of complex situations.

¹¹ There is no clear indication of any monosyllabic short-vowel Proto-Dravidian root that does not end in a consonant. Possible counterexamples, such as the verb for 'die,' are irregular and in fact end in an **H*: PDr **caH-*. The **H* is lost in all cases except Br *kahing*. See sections 121.31(5) and 422: 30.

¹² Emeneau, 1973: p. 80 explicitly credits Krishnamurti for the concept. I continue to call it Emeneau's rule because it has become

established in the literature under that name. Also, since Krishnamurti (1961: p. 81) does not believe in a contrast of 2C_2 versus 2C_1 after 1V_1 (with which I tend to agree), he did not formulate the rule specifically, as Emeneau did.

¹³ All examples in South Dravidian which are traditionally cited in a single liquid can in fact be equally well cited in a geminate liquid. There are no contrasting forms. Thus, in this way and at this level variants A and C are equivalent; see Krishnamurti (1961: p. 81). I have kept the distinction because it is standard in the literature.

TABLE 1.3

Dravidian Morphophonemics

Root: ${}^1C_0^1 {}^1V_1^2 {}^1C_0^2$ (also ${}^1C_0^1 {}^1V_1^1 {}^2C_1^1 {}^2V_1^1$?)

	<u>Root Variants</u>	<u>Derivative Stems</u>
(A)	${}^1C_0^1 {}^1V_1^1 {}^2C_0^1$?
(B)	${}^1C_0^1 {}^1V_2^2 {}^2C_0^1$	${}^1C_0^1 {}^1V_1^1 {}^2C_1^1 + {}^2V_1^1 {}^3C_0^2 \xRightarrow{(5)} {}^1C_0^1 aV_2^2 {}^3C_0^2$
(C)	${}^1C_0^1 {}^1V_1^1 {}^2C_2^2$	for all: $(+{}^3V_0^1 {}^4C_0^2)$

${}^x C_z^y$, x = syllabic position, y = maximum occurrence, z = minimum occurrence.

\rightleftharpoons = etymological related stems found in both forms. \Rightarrow = derivation.

1C = any consonant except apicals (alveolars and retroflexes)

2C = any consonant except *ñ

${}^3C, {}^4C$ = any consonant, lax, tense, clustered (except *rr ?)

1V = any vowel (a, i, u, e, o) ${}^2V, {}^3V$ = a, i, u

$aV = {}^1V + {}^2V$ (loss of 2C with vowel merger)

1V	a	i	u	a	i/e	a	u/o
2V	a	i	u	i	a	u	a
aV	\bar{a}	\bar{i}	\bar{u}	\bar{e}	\bar{e}	\bar{o}	\bar{o}

① Krishnamurti's rule; see section 122.11.

② Emeneau's rule; see section 122.12.

③ Zvelebil's rule; see section 122.13.

④ Rao's rule; A = verb, B = noun, 2C = apical; see section 122.14.

⑤ Stem mutation rule; see section 122.15.

pointing out real problems with current statements of morphophonology, Subrahmanyam's phonological approach is clearly preferable. However, many problems remain and form-class is involved although, I believe, indirectly.

122.15 **Stem mutation rule.** If we look at some of the stem variants in South Dravidian, which is more closely studied, reasons for the complexity appear. In these languages, 2C of a triconsonantal stem, ${}^1C_0 {}^1V_1 {}^2C_1 {}^2V_1 {}^3C_0$, frequently weakens and is lost, resulting in the fusion of vowels resulting in a long vowel; see table 1.3, Ta *peyar* : *pēr* 'name', *muka* : *mō* 'to smoke'. The result, of course, looks just like a variant B root, and can be reanalyzed as such leading to considerable complication in derivational history. It is not all that easy to discern just what is an archaic root and what is not. Only a detailed verb by verb analysis can hope to unravel some of the intricacies.

122.2 The major morphophonemic patterns are summarized in table 1.3. Note that there are up to three root variants. However, as Krishnamurti (1961: p. 81) has pointed out, it is by no means certain that variants A and C are actually different. Zvelebil's and Rao's rules show that in many cases there is alternation among the root variants. However, Krishnamurti's and Emeneau's rules make it clear that in most derivations (and some archaic morphology) there is only one root variant, A, that appears in derived stems. Furthermore, due to the stem mutation rules (5), stems can reappear as roots. For all of these, further derivation and use of augments is possible. Also, these rules do not explain all of the variation actually attested.

1.3 COMPARATIVE DRAVIDIAN MORPHOLOGY

130.0 Most of the work in the last forty years on comparative Dravidian has been done on the phonology. Other major efforts have very properly gone into fieldwork on new languages and into etymological dictionaries; cf. Burrow and Emeneau, 1960; 1969. Relatively little has been done on comparative morphology. What has been done is often geared to a specific language or language group; cf. Krishnamurti, 1961 on Telugu and Emeneau, 1962 on Brahui. Only recently has the first attempt at a systematic handling of Dravidian morphology appeared; Zvelebil, 1977. There are many reasons for this; primary among them are the obvious need for a working comparative phonology first and the small number of workers in the field. Another, much more insidious, reason is that Dravidian morphology seems simple and straightforward at first, but any comparative work reveals

horrendous complications, particularly in the verb. There are basically three reasons for this opacity: (1) Dravidian languages do have simple surface morphologies with relatively few morphemes. There is often not enough detail to carry a system perceptibly through extended language change. (2) The Dravidian languages are mostly localized and contiguous. Areal considerations often swamp genetic ones, particularly considering the previous point. This is most difficult to control when all of the areal languages are themselves Dravidian. (3) Due to the quirk in its morphology of having an appellative system paralleling the simplex morphology, Dravidian languages commonly have two separate, competing, and complementary lines of morphological development. Thus, instead of a straightforward, linear development (even as a simplified model), the result is more like a DNA molecule of two helical, interstitial, twisting lines, each dependent on the other.

130.1 Dravidian surface morphology is typically agglutinative in structure. Not only are the morphemes strung together like pearls in a necklace, but the grammatical morphemes are usually at least a syllable in length. Only occasionally do morphemes of a single consonant or vowel exist. The few that do are often archaic and seem to be the result of phoneme loss or other changes.¹⁴ Normally, Dravidian morphology falls into the general pattern of stem + medial + ending where the stem itself consists of root (+ augments). There are only a few exceptions of a stem followed by a unit morpheme. The root is well understood, and the endings tend to be quite transparent in use and often in origin. It is the middle ground of augments and medials that tends to be complex and ambiguous and where morphemes of a single phoneme become common. It is a general truism that new morphology is added at the end of a word. An equally valid truism is that the root does not change and takes no part in morphology except indirectly as the result of a series of zero markers (0). As a result, old morphology tends to pile up (and is often ground up) immediately after the root. With nouns this is fairly obvious. Postpositions become cases (bound postpositions) that in turn become morphological augments which become empty morphs (*cāriyai*) which

¹⁴ Doublets do exist. For example, the genitive ending has forms as a syllable (*-in*) and as a single phoneme (*-n-*). It is sometimes difficult to determine which variant is the more basic. Due to its concentration on archaisms, the forms discussed in this work are more likely to be complex, ambiguous, and monophonemic than is typical of a synchronic description of a single Dravidian language.

become root augments that become nothing.¹⁵ For example, the Tamil word for 'of (belonging to) a tree' is *marattiṇuṭaiya*, where *uṭaiya* is a possessive postposition (<*uṭai* 'belonging to'), *-iṇ-* is an old genitive marker functioning here as a *cāriyai*, *-tt-* is a morphological augment itself probably from an old genitive (cf. Ta *eṇatu* 'my'). The *a* (full form *-am*) is a neuter derivative augment and *mar* is the root 'tree/wood'. A possible analysis is that of a root followed by four genitive markers only one of which, the last, is functional today. The rest have other, often obscure, functions.

For nouns, medials consist only of morphological augments and plural markers and these are often missing. With verbs this tendency to collapse the morphology becomes somewhat more complex. For them, the medials become much more functional since these are the markers for tense-mood-aspect and negation. Nevertheless, similar tendencies exist. For example in Kui and Kuwi, the future-habitual (general) has a marker of *-n-* for all persons and numbers except for the second person forms which have *-d-* and first person singular which has \emptyset in Kui and ? in Kuwi; note Kui examples in table 1.9. Another language in the subgroup, Konda (*kūbi*),¹⁶ has this form marked in *-n-* throughout and the second person forms having *-d-* in the personal endings. It will be argued in detail later (section 132.4) that the situation in Konda is the older and that Kui-Kuwi lost the tense marker *-n-* before stops and reanalyzed the endings **-di/*-derə* as **-d-i/*-d-erə*; i.e., the *-d-* of the ending was reinterpreted as the tense marker without moving or any change taking place to it except the loss of the preceding *-n-*.

In Telugu a large group of verbs (Krishnamurti, 1961, Class II) alternate stems in final *-s/-c* with those in final *-w/-y*; *piləc* 'call' (*pilus-*, *pilic-*, *pilaw-*); *taḍəs* 'get wet' (*taḍus-*, *taḍis-*, *taḍaw-*); *rās* 'write'

(*rās-*, *rās-*, *rāy-*). These verbs contrast with another group (Class III) which do not alternate and keep the *-s/-c* throughout. Similarly, Kannada and Tulu commonly, and other languages sporadically, will have verbs end in *-cu/-su* which do not have this ending attested elsewhere; Ta *alacu*, Ka *alacu*, *alsu*, Tu *alacu* 'to shake'; cf. Ta *alai* 'to shake', Te *alayu* 'to be tired'. See Subrahmanyam, 1971: pp. 223–224 and Krishnamurti, 1961: pp. 147–150 for further examples and discussion. When these forms are compared with Gondi (and all of the Gondi-Kui subgroup), it is clear that the past adverbial participle (converbial) in *-cī/-sī* (<**-ci*) is the origin of the forms found elsewhere in Dravidian. In Telugu for the Class II verbs the *-c-* of the converbial was reanalyzed as part of the verb stem, i.e., *pili+ci* became *pilic+i* 'having called'. In the South Dravidian languages the forms with the added *-cu* became the sole stem (sometimes with doublets, Ta *uraicu*, *urai* 'to rub'). Thus, it is not a matter of any actual change in these forms, but rather, a matter of reinterpretation about how their morphology functions.

130.2 In summary, typical Dravidian words have an agglutinative structure of root (+ augment) + medials + endings, a structure almost certainly the same as that of Proto-Dravidian. However, this does not mean that the markers are the same or even similar, or that reconstruction is simple. The agglutinative structure provides a reference grid and has a life of its own, but only as a grid. The actual morphological markers have a complex history of moving across the grid (cf. Kui and Telugu above) or of remaining the same or in similar grammatical functions while the rest of the morphology of that system changes. For example, in Tamil the neuter future verb and participle ends in *-(kk)-um*. It has kept much the same usage and form through the history of Tamil, although it now has no direct connection to the rest of the morphological system of which it is part; see table 1.10 for examples. In section 132.41, it will be argued that this situation applies up to the Proto-Dravidian stage, i.e., *-um* has kept essentially the same function and form from Proto-Dravidian to Modern Tamil while the framework has shifted dramatically around it. In these terms, discussions of Dravidian morphology can discuss the grid and the function (the slots). When this is done, as in P. S. Subrahmanyam, the result is a catalog in which all the slots are occupied by the same markers. Another approach follows the actual morphemes (the markers), and has them cutting wildly across the slots. Here, the second format will be used except when surveying the literature. Both systems have their strengths and weaknesses, and

¹⁵ The word *cāriyai* is used in the Tamil grammatical tradition to describe morphemes which are used as transitional augments between the stem and the endings. These may be required for certain morphological or phonological reasons or they may be lexically determined. In any case, they have no definable meaning. The use of the term *cāriyai* is an elaborate way of saying that a form occurs in a specific environment, but that one has no idea why it is used.

¹⁶ Konda is the name applied to them by others and is related to the term Gondi (referring to hills). They call themselves *Kūbi*. Since this area of India does not phonologically contrast any voiced labial [v,w,b], Kui, Kuwi, Kubi are not only really the same word, but are pronounced the same. If the indigenous names for Gondi, *Kōi*, and *Kōya* are added, true confusion reigns. For these reasons, I prefer to use the misnomers (Gondi and Konda) and maintain the spelling distinctions at all cost.

both are ultimately unsatisfactory. We do not truly understand Proto-Dravidian morphology, with the exception of small, closed systems like the personal pronouns and the numerals.

A related complication is that this sequence of base + medial + ending (base = stem + augment) is synchronically real for most Dravidian speakers. They use this simple model in their own ongoing analyses of their languages. As a result, competing models of morphology coexist in a language (in different dialects). Where literary standards have more than one dialect as their base, such as in Old Tamil, true ambiguity occurs as to which base a form is built on.

An example of this confusion from Old Tamil is the future form in labials (*pp*, *v*). Sometimes the form will be *koṭukkuven* 'I (will) give' (*koṭu-*), at other times *koṭuppen*, the modern form, is cited. This is a "strong" verb in which obstruents after the stem are doubled (indicated here by an equals [=] juncture); "weak" verbs do not show this alternation: *varuvar* 'he (will) come' (*vā(r)-*). The problem for Old Tamil is which base is appropriate for the futures in **-p*. If it goes on the infinitive base, the "strong" form comes out in the infinitive stem (*-kk-*), which is then followed by the simple labial (**p > v*); *koṭu* = *ku* + *p* + *eṇ* → *koṭukkuven*. If, on the other hand, the labial future goes on the imperative base (=stem), then the "strong" form comes directly on the labials (**-p* → *pp*); *koṭu* = *p* + *eṇ* → *koṭuppen*. Obviously, it is a dialect split which has been recorded in the literature. Significantly, according to M. S. Pillai (personal communication), the split still survives. The Maravar community outside Madurai still uses *koṭukkuvēṇ*. In terms of synchronic grammar, these changes are the result of a single and minor shift in rule format. When additional forms are added from appellative and periphrastic systems, the situation becomes very tangled indeed. An excellent example of this is given by D. N. S. Bhat (1976: pp. 250–251), where he shows that the dialectal variants of the future tense in Kannada, whose coastal dialects use the stem and inland dialects use the past base, can be explained only by appeal to Old Kannada. There it is clear that the coastal forms were morphological with major phonological change while the forms of the inland dialects are periphrastic in origin. He points out that without the attestations of Old Kannada there are few remaining clues to the true origin of the modern forms. He points out the danger of using simple surface parallels in comparing Dravidian morphological forms.

130.3 Dimorphism. Dravidian morphology's most distinguishing characteristic is its almost complete restriction to two form-classes—nouns and verbs.

With the exception of clitics and a few other stray forms, every word in a Dravidian language is either a noun or a verb. The morphologies for each are normally quite distinct. Noun morphology, noun modifying noun, and denominal noun derivation are normally different from verb morphology, verb modifying verb, and verb derivation. Cross class constructions, such as verb modifying noun and deverbal noun derivation, tend to have distinct forms of their own. There are, of course, many instances of mixed forms (verbal nouns with tense, etc.) and of noun morphology invading the verbal system (such as the appellatives and infinitives; see sections 131.4 and 132.312). Also, there are many roots which are ambiguously both nouns and verbs; Ta *malar* 'blossom' and 'to bloom'. However, such roots always become either one or the other in their morphology. In general, however, nouns and verbs are distinct and exclusive. A root may be ambiguous, but it will have an interpretation either as a noun or as a verb and as nothing else.

130.31 Adjectives. While most modern Dravidian languages have a form-class of adjectives, there is considerable dispute as to whether this is the case for Proto-Dravidian or not. Most modern Dravidian adjectives are clearly derived from other sources, typically from participles (Ta *keṭṭa* 'bad' < id. 'spoiled' ← *keṭu* 'to become rotten') or from compounding stems of nouns (Ma *manuṣa* 'human' ← *manuṣaṇ* '(male) human being' < Skt.); see section 131.202. Other more complex sources are the appellatives, which in Tamil-Malayalam have been used in the neuter plural form to create adjectives; Ta *nalla* 'good, proper' < *nal(l)* + *a* 'those things which are good' ← *nal* 'good'. There is a tendency in South Dravidian (an absolute rule in Malayalam) for adjectives to end in *-a*, which comes from a grouping together of all of the sources mentioned above. Thus, a new form-class with distinctive morphology has been created out of various sources. Similar types of development occur elsewhere in Dravidian. Needless to say, they do not agree on details and no Proto-Dravidian forms emerge. Such observations have led many, including Andronov (1970: pp. 80–83), to totally deny the existence of the Proto-Dravidian adjective.

However, there are a few forms which cannot be so readily explained away. Most crucial are the compounding form of the numerals (see section 131.5 for details), the basic color terms, and a few similar stems such as *nal* 'good'. Zvelebil (1977: pp. 59–69) makes a strong case for the Proto-Dravidian adjective. Unfortunately, he overstates his case and includes words

such as **put(u)* 'new' (DED 3511), which can be clearly shown to be verbal participles in origin. Tamil has a doublet (a common situation) for this word with *putu* and *putiya*. *Putiya* is clearly a past participle in form and origin. *Putu* was derived from the nonpast participle *putu(m)* during the Old Tamil period when final *-m*'s were regularly lost in sandhi. That this is the true description is confirmed by the restriction that while *putu* is the most common adjectival form, the predicate appellative (that is new, etc.) is only *putiyatu*. This is due to a formal restriction that only past participles form appellatives directly; nonpast participles must make a complex base shift. Thus, *putu* cannot form a predicate appellative directly because it is a nonpast participle and the necessary morphology is not available. The traditional Tamil description of an adjective as a participle without tense is well justified. Nevertheless, Zvelebil is perfectly correct that the numerals, colors, and a few other terms are modifiers, have a distinct monosyllabic morphology (usually with vowel length alternations), and are reconstructible to Proto-Dravidian. However, does this mean that there was a form-class *adjective* in Proto-Dravidian? Personally, I agree with Zvelebil that such forms exist, but also with Andronov that there were no "adjectives" in Proto-Dravidian. A dozen terms do not justify a distinct form-class in this type of situation. Since these terms can be handled as noun compounding stems, I would prefer to do so. However, it remains more of a philosophical question than a grammatical one. Both approaches are defensible and reasonable.

Similarly, there is no distinctive morphology for adverbs. Most modern Dravidian languages have no such form-class. Malayalam is unusual in having developed a regular one in *-e*; Ma *dūram* 'distance' (<Skt.), *dūra* 'distant', *dūre* 'far'.

130.32 Clitics. The major exception to the rule that all words are either nouns or verbs is the clitics. These grammatical morphemes follow words (or phrase groupings) to indicate such basics as inclusion in a group (Ta *-um*), exclusion from a group (Ta *-ē*), isolated emphatic uniqueness (Ta *-tāṇ* 'only, just'), and interrogation (Ta *-ā*, *-ō*). They are commonly used in sets to handle conjoining: Ta *-um* . . . *-um* (. . . *-um*, etc.) 'and', *avaṇum aṇum* 'he and she', *-ā* . . . *-ā* (. . . *-ā*) 'or?', *avaṇā aṇā* 'he or she?'. Even when they are clearly derived from nouns or verbs (Ta *-tāṇ* 'only' < *tāṇ* 'oneself', *-kūṭa* 'too' < *kūṭa* 'to join'), clitics lose their original morphological class and become absolutely invariant. The inclusive clitic can be reconstructed as PDr **-uN*. Probably, the basic monosyllabic ones

(*-ā*, *-ē*) can be also. All Dravidian clitics follow the words to which they are attached and the inclusive **-uN* cannot be used with finite verb predicates; see section 141.2.

130.33 Particles. With the exception of grammatical bound morphemes, few other forms exist in most Dravidian languages. Fewer still can be attributed to Proto-Dravidian, and the only group worth mentioning are the interjections. All other grammatical classes discussed, such as postpositions and conjunctions, are fundamentally either nouns or verbs, or possibly clitics. Dravidian morphology is either/or with a footnote.

131 Substantives

131.0 The typical Dravidian noun is agglutinative, tends to be well defined at the ends, and is often ambiguous in its morphology in the middle. The complex noun will consist of a root which, together with a derivational augment or augments, forms the stem, which is the proper morpheme of a specific noun. The stem in turn, may be followed by morphological augments which are required (often arbitrarily) by specific forms. These often have no stable meaning and often go under the Tamil term *cāriyai* (see section 131.1 and footnote 15). The stem plus these augments is called the base. The base is followed by the case endings, which may then be followed by postpositions. Clitics can follow either the cases or the postpositions (often a fuzzy distinction, in any case) and mark the end of the noun. Thus, the Dravidian noun can be summarized as:

root (+ derivational augment(s)) (+ morphological
augment(s)) + case (+ postposition).

The root and case endings tend to be well defined, although case endings do mutate through time. The noun root need not be the same as a verb root, and in many cases a derivation consists of a verb root with its verbal augments. The augments are not well structured. They are often difficult to define or even identify.

131.01 Noun root. It is difficult to speak of the structure of a root of a Dravidian noun. Loan words are accepted as nouns many times more frequently than as verbs in Dravidian languages. Even within the Dravidian lexical stock, there are no discernible limits. G. Sambasiva Rao (1973a: pp. 41–187) writes that after a Dravidian monosyllabic root ((C)V̄(C)) every phonologically possible form of an augment (-V(C)C) was attested except **-Vrr̄*. The vowels of the augments were largely conditioned by the following con-

sonant(s), and only rarely could any meaning at all be put with these derivative augments.

Nevertheless, it is possible to place a limit at the other end. There is no clear case of monosyllabic nominative (i.e., no case ending), consisting of a short vowel followed by no consonant or a lax one, i.e., $^1C_0^1V_1^2C_0^1$. While such forms are common, even the norm, with derivatives, they do not exist as independent nouns.¹⁷ They do, however, exist as verbs.¹⁸ Traditional examples of such nouns as *Ta pal* 'tooth' versus *pāl* 'milk' are best analyzed as *pall* and *pāl* respectively; see G. S. Rao, 1973a: p. 11; Krishnamurti, 1961: p. 81.¹⁹ In general, for true monosyllabic nouns, short vowels go with tense consonants ($^1V_1^2C_1^2$). This is really a special case of Krishnamurti's Rule; see also Zvelebil's rule, section 122.13. It does not apply in certain archaic usages with endings such as the obliques of the personal pronouns.

131.02 Gender. Gender distinctions are made only in third person forms. Leaving aside minor and late developments, Dravidian attests three major patterns for gender and number in appellatives and verbs. Using Subrahmanyam's (1971: p. 414) categorization, there are: Type I (SDr.) masculine, feminine, and neuter singulars, human and neuter plurals; Type II (Te., KxMt.) masculine and nonmasculine singulars, human and nonhuman plurals; Type III (CDr. less Te.) masculine and nonmasculine, singular and plural. Everyone (except Burrow and Bhattacharya, 1953: pp. 9–10) agrees that Type I is an innovation in South

Dravidian. Krishnamurti (1961: pp. 255–257, 1974) argues that Type III is Proto-Dravidian and Type II the innovation. Others (Emeneau, 1955: pp. 148–149; Subrahmanyam, 1969a: pp. 79–86, 1971: pp. 414–415) have argued that Type II is Proto-Dravidian. The only difference in pattern is whether a feminine plural is **avar* (i.e., human) or **av(ay)* (i.e., nonmasculine). On the basis of distribution and its use in explaining attested variation, I agree with Emeneau and with Subrahmanyam (1976) and think that Type II is the most reasonable Proto-Dravidian pattern. This pattern is asymmetrical with masculine and nonmasculine contrasted in the singular and human and nonhuman contrasted in the plural. Thus, separate feminines and neuters exist as cryptocategories discernible by their different plurals. South Dravidian (Type I) added a separate feminine in the singular and Central Dravidian (Type III) generalized the singular's pattern to the plural.

131.1 Derivation of Nouns

131.10 Derivational augments fall into the basic general pattern of $^2V_0^3C_0^3$ onto a monosyllabic root; see section 122.1. However, they do not remain confined to that pattern. Due to the amorphousness of the noun root, they become a derivative syllable added to any acceptable stem. Deverbal derivation and rederivation are common; *Ta nil* 'to stand, stop' > *nilai* 'to become fixed or established; a place, condition' > *nilaiyam* 'situation, institution', etc. Out of the numerous derivatives describable, only a handful have a perceptible meaning.

131.11 Foremost among these is the masculine singular derivative **-anrə/-an*. Two schools of thought exist on its original form. One group (Emeneau, 1955: pp. 146–148; Shanmugam, 1971: pp. 104–114; Subrahmanyam, 1969b: p. 741, 1971: p. 416) consider the South Dravidian attested form *-an* to be original and the Central Dravidian attested nominative **-anrə* to be derived (*-an* + *tə*). Others (Krishnamurti, 1961: p. 263, 1974: pp. 339–341; Burrow and Bhattacharya, 1970: pp. 35–36) hold the opposite, maintaining that South Dravidian lost the final obstruent, i.e., they generalized the oblique. On the basis of the Kurux reflexes (*-as*) being more readily explained with **-anrə*, I tend to agree with Krishnamurti (1974: pp. 339–341). The ending **-anrə* is widespread in Dravidian where it always marks singular masculine nouns, often obligatorily. It is used in men's names, occupations, and kin terminology and is also involved in the appellative constructions. The main distinction between the two is the lack of any consistent feminine (or nonmasculine) formative in deri-

¹⁷ G. S. Rao (1973a: pp. 251–265) gives numerous examples of verbs, which are clearly short-voweled with a single final consonant, having their related nouns with long vowels. In other words short-voweled, nongeminate, monosyllabic nouns are structurally inadmissible.

¹⁸ The explanation is that verbs are almost always polysyllabic in use. It is highly significant that the two archirregular verbs in South Dravidian, *vā(r)*- 'come' and *tā(r)*- 'give' both have long vowels in the imperative, i.e., *vā* and *tā*. Thus, they maintain the injunction against short, open monosyllabic words. For all other verbs, whose imperatives are less common, the imperative has been reanalyzed as short on the basis of the form found elsewhere in their morphology.

¹⁹ Even in Literary Tamil, forms like *pul* are attested only when absolutely phrase final. If any vowel follows, the geminate form is found; *atu pul* 'That (is) grass', but *atu pullā* 'Is that grass?' Colloquial Tamil and Malayalam always attest geminates with a vowel, i.e., *pullu*. The simplest explanation is that, as a spelling rule, Literary Tamil spells underlying geminates as single when phrase final in short monosyllabic nouns. In the case of nouns of the form *CVCu*, this *-u* is part of the word and is not epenthetic unless the work is a compound, i.e., the appellative pronoun *atu* (<*a* + *tu*) 'it'. In all other cases this *-u* cannot be dropped in nouns, but it can in verbs; *Ta naṭu* 'center' + *il* 'locative', *naṭuvil* 'at the center'; *naṭu* 'to plant' + *a* 'infinitive', *naṭa* 'to plant'.

variations while it must be regular in appellatives. The ending **-anrə* is regularly replaced by the human plural **-ar* in the plural; see section 131.13. Examples at the Proto-Dravidian level include: **oruvanrə* 'one man' (DED 834(a)), **māmanrə* 'son' < 'male child' (DED 3768), **tozanrə* 'friend' (DED 2939), **mannanrə* 'king' (DED 3909), and **kaḷvanrə* 'thief' (DED 1156). See Shanmugam, 1971: pp. 104–108.

131.12 The most important of the neuter formatives is **-aN* (i.e., *-am/-an* but not *-aṇ*). This ending, found throughout Dravidian, is typical of neuter nouns, both abstract and concrete. It has some parallels with the masculine **-anrə* in that both have a compounding form in South Dravidian (an ancient genitive?; see section 131.202) with just the *-a*. Its formal status is ambiguous and variable. It clearly is a nominal derivative: Ta *kaḷ* 'to steal', *kaḷḷaṇ* 'thief', *kaḷḷam* 'theft'. Since it occurs only in the nominative regularly replaced by *-(t)t-* in the oblique (see section 131.201), it can also perfectly legitimately be analyzed as a nominative case ending or a nominative base formative; see section 131.20.

Actually, the situation is both or either. Closely related languages could have quite different formal analyses to little effect. However, its actual, rather complex, use is remarkably consistent. Since this *m* is partially a purely morphological marker it is subject to purely morphological change and replacement. Kannada and Tulu, for example, have lost the *-m* entirely (leaving *-a*), but the regular system is maintained (oblique in *-d-*, etc.). Proto-Dravidian examples include **appam* 'cake' (DED 132), **maram* 'tree' (3856), **kalam* 'threshing floor' (1160). See Sambasiva Rao, 1973: pp. 78–84.

131.13 The basic nonmasculine ending is PDr **-ay*, **-i*. There seems to be no rule to account for the distribution between the two forms. Both the ending **-ay*, which often becomes **e*, and **-i* refer to female kin, animals and to general neuters. Thus one can find: **attay* 'father's sister' (DED 121), **akkay* 'elder sister' (24), **mām-i* 'mother's brother's wife'; **kapp-ay* 'frog' (1027), **yāt(ṭ)-ay* 'ram', **kot-i* 'sheep' (1799), **kil-i* 'parrot' (cf. 1311); and **col-ay* 'flower' (2357), **puk-ay* 'smoke' (3483), **cukk-ay* 'star' (2175), **kūl-i* 'daily wages' (1586), **koṭ-i* 'tip, top, point' (1704), **kev-i* 'ear' (1645a). See Shanmugam, 1971: pp. 117–119; Sambasiva Rao, 1973a: pp. 55–58, 70–77.

131.14 A related form is *-may*, which in some analyses is considered to be a compound of *um* + *ay* (Sambasiva Rao, 1973a: pp. 78ff., 128ff.). However, since it has a specific usage as a formative of abstract nouns, I prefer to consider it a unit morpheme. Exam-

ples include PDr **orumay* 'oneness' (834), **karumay* 'blackness' (1073a), **irumay* 'twoness' (401), PSDr **naṇmay* [*<*nal*] 'goodness' (2986), **kaṭamay* obligation' (*<*kaṭaṇ* 'debt, duty') (934). This is not the only formative of abstract nouns which is not connected with verb morphology; cf. PDr **erumay* 'female buffalo' (699) : **erutu* 'male buffalo'.

131.15 The other general nonmasculine formative **-tə* is usually more closely associated with the appellative system; see section 131.4. However, it does sometimes seem to have a derivative value of its own. Normally as **-tə*, it is a neuter and an appellative or closely connected; see the neuter forms of the numbers, section 131.5, but note words like PDr **pozu-tə* 'time, sun' (DED 3724), where it seems to be purely derivative. In the compound form of **-ti* (*tə* + *i*) it is a neuter formative; PDr **panṇri* 'pig' (*<pal* 'tooth' + *ti*) (3326). See Sambasiva Rao, 1973a: pp. 142–145ff.

In the form of **-tti* it is a clear feminine marker; PDr **orutti* 'one woman' versus **onru* (*<*on* + **tu*) 'one thing' (DED 834). A feminine form *-aḷ* is traceable to South and Central Dravidian. In Central Dravidian it exists only as a feminine derivative marker: PSDr/PCDr **mak-aḷ* 'daughter' (PDr **maka* 'child') cf. PKxMt **maG-i* 'daughter' (3768). See Sambasiva Rao, 1973a: pp. 173–175 and Shanmugam, 1971: pp. 115–121.

131.2 Basic Nominal Morphology

131.20 Morphology is used here in its more restricted sense of referring to the regular patterns of morphemes in the languages involved. In this sense it contrasts with derivation, which is concerned with lexically oriented and less predictable morphological processes.

Morphological augments are added to the stem to create the base to which the case endings are attached. Two primary bases, the nominative and the oblique, normally exist for Dravidian nouns, but some languages also have a third base used in compounds. For most nouns the nominative base is primary and the oblique is obtained by an ending which is often assimilated. For the pronouns, a different alternation, using vowel length, is used. The nominative base is used with the nominative case (Ø ending) and usually with the vocative. It is the unmarked form and as such can function in other casual usages. All other overt cases are formed on the oblique. For many nouns there are no morphological augments and the two bases are identical. However, the morphological contrast between nominative and oblique is fundamental in Dravidian. The only distinctive nomina-

tive base ending is the neuter ending **-VN*, which was discussed in the section on derivation, section 131.12. At least for South Dravidian, it makes more sense to analyze it as a base rather than as a word derivative or as a case ending; see Zvelebil (1977: pp. 25–27) for a general discussion and McAlpin (1975*b*: pp. 208–210) for a specific handling of Malayalam in this format.

131.201 The oblique base is hopelessly entwined with the genitives. Even where a distinct oblique form exists, as in the pronouns, it will function as a genitive. There is often no distinction in form between an oblique base and a genitive case. The distinction in function is that the cases regularly go on the oblique base. To discuss these as cases leads to statements of building one case on another. A base is a distinction of function, not necessarily of form. The forms involved will be discussed with the genitives; see section 131.224.

It is not clear if bases existed separately from genitives at the protostage for nouns, although this is clearly the case for personal pronouns. In any case, it is a useful synchronic device for describing morphology which has become obscured as to its origins.

131.202 The compounding base is used in noun compounds and as a modifier. It sometimes, as in Malayalam, tends to fall together with adjectives. It is clearly described only in South Dravidian, but the numerical forms are clearly Proto-Dravidian. In many cases it resembles the noun stem without endings. In Tamil-Malayalam it commonly ends in *-a* for nouns in *-aṇ* and *-am* and *-ā*; see sections 131.11 and 131.12. *Ta maṇuṣaṇ* 'male human being', *maṇuṣa* 'human', *kampaṇ* 'a proper noun', *kamparāmāyaṇam* 'Kamban's Ramayana', *intiyā* 'India', *intiya* 'Indian'. It sometimes makes subtle contrasts with the oblique base; *marakkompu* 'tree branch', *marattukkompu* 'branch of the tree'; *intiya aracu* 'Indian government', *intiyāviṇ aracu* 'Government of India'. See section 131.5 for discussion of the numerical forms.

131.21 **Plurals.** The plural in Dravidian nouns and pronouns is not an obligatory category except for most Central Dravidian languages, which have developed it into one. In the protostate as attested in South Dravidian and Kurux-Malto, plurals are restricted to human nouns or to situations where the plurality is being stressed. Following a general tendency to avoid needless redundancy, neuter plurals are not normally used in contexts where the plurality is obvious, such as with numerals. The actual plural morphemes tend to be replaced and to double up in reinforcing the plural meaning; OTa *avaṇ* 'he', plural *avar* 'they', NTa *avar* 'he' honorific, *avarkaḷ*

'they' (in current usage, *avarkaḷ* is also 'she' honorific).

Of the plural markers, one of the oldest and most restricted in the plural is **-m*. This is restricted to the personal pronouns and is clearly Proto-Dravidian. The general plural for humans **-Vr* is widely attested in nouns and is also clearly Proto-Dravidian. The neuter plurals revolve around the forms *kaḷ* or its components *ka* or *-(u)* are widespread and probably Proto-Dravidian, but have the look of an innovation. For example, it is very rare in Old Tamil. The neuter appellative plural in *-va/-a* completes the forms that can be reconstructed to Proto-Dravidian. Other forms exist, but only in specific subgroups. See Zvelebil, 1977: pp. 14–16 for examples and discussion of the literature; Subrahmanyam, 1969*a*: pp. 86–100; and Krishnamurti, 1974.

131.22 **Cases.** In Dravidian, cases are bound postpositions. The Dravidianists' distinction between *case* and *postposition* is often arbitrary and sometimes meaningless. The common criterion holds that case endings go directly on the oblique base while postpositions follow a case ending. A better approach is that a case ending cannot be separated from its noun by a clitic while a postposition can be. These distinctions are valid for a synchronic situation, but very fluid diachronically. A case in Old Tamil (*-ttu*) is an augment in Modern Tamil. For comparative Dravidian, a case is a bound postposition which does not have any internal etymological source: among Tamil genitives *-iṇ* is a case while *uṭaiya* (<*uṭai* 'belong to') is not. See Zvelebil, 1977: pp. 18–33 for a detailed discussion with tables and examples of Dravidian case structure; and Andronov, 1976*b*.

131.221 The normal nominative ending in all Dravidian languages is nothing (∅). The only possible nominative ending is **-N*. This was discussed as a derivative ending for neuter nouns in section 131.12. I have usually considered it as a nominative base marker, but Zvelebil (1972*b*) and Andronov (1976*b*: pp. 717–718) have analyzed it as a nominative case ending. In any case, it is a Proto-Dravidian morpheme that is intimately associated with the nominative, whatever its status in the daughter languages.

131.222 The accusative case is regularly used to mark the direct object of the verb. Two forms are widely attested: one is clearly Proto-Dravidian, the other is more doubtful. Except in Tamil-Kodagu, the generally attested accusative ending is **-Vn*, usually **-an*. In Tamil-Kodagu the accusative ending is *-ay*, which is reflected in Kui-Kuwi *-i* and Brahui's *-e*. It seems to be a Proto-Dravidian form, but the relationship of *-ay* to *-an* is not clear. The dominant accusa-

tive ending is $^{*}(a)n$. Andronov (1977b: pp. 223–224) attributes the TaKod $^{*}-ay$ to hypercorrection ($^{*}-an > a > e > ay$).

131.223 The dative is a complex case in many Dravidian languages. It marks the experiencer of the action of the verb, hence the indirect object, but also the subject of verbs of emotion, physical and mental states (Ta *enakku avanai-p piṭikkum* ‘I₁ [dative] like₃ him₂ [accusative]’). It indicates motion towards a place (but not towards people) or purpose. It also is commonly a locative in time or of temporary location (Ma *naṇṇal bassinā pooyi* ‘we₁ went₃ by bus/in a bus [dative]₂’). In some languages it has fallen together with the accusative, but usually with the dative’s morphology predominating. Brahui has a unified objective (direct and indirect) case in $-e$ with a separate purposive in $-ki$ which is clearly cognate with the dative. The universally attested form is $^{*}-(k)ku$. The $-ə$ of some Malayalam nouns is a highly idiosyncratic development.

131.224 There are at least three genitive endings in Proto-Dravidian. These have slightly different shades of meaning in the attested languages, but the exact reconstructions are not clear. These endings are thoroughly intermeshed with the oblique base formation. Except for the personal pronouns, obliques are normally frozen genitives. This is particularly the case for $-(t)tu$, which is the regular oblique for nouns in $-VN$ and with assimilation for other groups (Ta *vīṭu* ‘house’, obl. *vīṭtu* ← *vīṭ* + $[-t]tu$). The ending $(t)tu$ is primarily an oblique marker, but since all simple obliques are genitives, on one level the distinction is pointless.

Zvelebil (1972b) calls the form $^{*}-in$ ‘adnominal’ and the form $^{*}-ā$ ‘possessive.’ This catches some of the distinction between them, but it is hard to get good contrastive examples. The ending $^{*}-in$ has a wide range of meaning and usages. At its broadest it is best described as nonverbal. It never marks a subject or object of a verb, but can describe genitive, ablative, comparative, and partitive relationships. The ending $^{*}-ā$ seems to mark possession more clearly. It is commonly replaced by a more distinctive postposition, such as $-utaiya$ in Tamil. In their dual capacity as oblique and genitive endings, these forms regularly follow one another. This is probably the origin of the pronominal genitive i.e., $^{*}-atu$, which is Proto-Dravidian. In Old Tamil alone the following combinations are known: *an* ($<a + in$), *attu*, *inin*, *tta*, *ttin*, *arr* ($<a + in + tt?$). There seems to be no clear order of precedent, but $^{*}-ā$ seems the most archaic and closest to the stem. This is supported by the fact that in Tamil the dative of the personal pronouns regularly has $-a$

before $-(k)ku$ as well as in their genitive $ātu$. The t of $ātu$ is probably from $-(t)tu$, but it may have a separate origin. Thus, four genitive/obliques can be reconstructed for Proto-Dravidian: (1) $^{*}-ā$, (2) $^{*}-in$, (3) $(t)tu$, and (4) $ātu$.

The genitive in $^{*}-ā$ may be the origin of, or have influenced, compound bases in $-a$. In Tamil-Kodagu neuters in $-am$, masculines in $-an$, feminines in $-al$, and epicene plurals in $-ar$ all form their compounding base by dropping the last consonant; see section 131.202.

131.225 The rest of the cases do not seem to have that extensive position in the morphology so typical of the foregoing. Of the remaining possibilities, two, the instrumental in $^{*}-āṇ$ or $^{*}-āl$ and the sociative in $āṭu$ can probably be reconstructed for Proto-Dravidian. However, these two cases have become so thoroughly confused on function that it is difficult to trace them separately through the languages. No other ending, with the possible exception of $-il/-in$ below, ranks as a case. All are postpositions with fairly obvious sources.

131.226 *Locative constructions.* There is no locative case for Proto-Dravidian, although many have been developed by the daughter languages. Location was expressed in several ways. Location nouns are inherent locatives and often tend to function as specific postpositions. Other cases took on a locative function, so that $^{*}-in$ could mean motion away from and $^{*}-(t)tu$ implied location in a place, which it still does in modern Malayalam: *eraṇākuḷattā* ‘in Ernakulam’. PDr $^{*}-(k)ku$ implied location in time or motion towards. Other locative notations were indicated by postpositions, some of which were very widespread and Proto-Dravidian in their own right. Most common is $^{*}ul$ ‘inside’. South Dravidian *il* ‘house’ is a locative ending, although some Dravidianists prefer to see it as a variant of $^{*}-in$.

131.3 Personal Pronouns

131.30 Pronouns in Dravidian languages come in two distinct varieties, personal and appellative. Personal pronouns are those proforms which change depending upon who is speaking (‘shifters’ in Roman Jakobson’s terminology, 1971). They are restricted to first and second person forms and to third person resumptive pronouns, which are used when the subject is repeated in a sentence. They are also called reflexive pronouns. Other third person situations are handled by deictic appellatives; see section 131.41. Dravidian pronouns indicate three persons and two numbers, singular and plural. Normally first person plurals have separate forms for inclusion ‘you and I (and they)’ versus exclusive ‘they and I’. Personal

TABLE 1.4

Bases and Cases in Proto-Dravidian

Nominative:	Ø (* <i>-N</i> , nonhumans only, see section 131.221.)
Accusative:	* <i>-Vn</i> , * <i>-an</i> (* <i>-ay</i> , a secondary variant, but widespread)
Dative:	* <i>-(k)ku</i>
Genitive/Oblique:	
1. Possessive:	* <i>-ā</i>
2. Adnominal:	* <i>-in</i> *
3. Oblique:	* <i>-(t)tu</i>
4. Pronominal:	* <i>-ātu</i> , combination of 1. and 3.(?)
Instrumental:	* <i>-ān</i> /* <i>-āl</i> } often confused in function
Sociative:	* <i>-ōtu</i> }
Locatives:	(no special forms)
1. Inherent in nouns of location	
2. Implied in other case forms; exx.:	
* <i>-in</i> * ablative, comparative	
* <i>-(t)tu</i> fixed location in space	
* <i>-(k)ku</i> location in time, motion toward	
3. Postpositions, exx.:	
* <i>ul</i> 'inside, within' (DED(S,n) 600)	
* <i>il</i> 'place, house' (DED(S) 420) Perhaps variant on <i>-in</i> .	

* Perhaps **in* is best described as *nonverbal*. It is never directly connected with a verb as subject, object, etc., but has almost any other function.

pronouns clearly indicate two basic forms, a nominative base and an oblique base. The most common and original rule has long vowels for the nominative and short vowels for the oblique.

The personal pronouns are the only system of forms which can be completely and reliably reconstructed for Proto-Dravidian, not that all Dravidianists agree on all details. See Subrahmanyam, 1970; Zvelebil, 1977: pp. 36–47 (and 1962); and Krishnamurti, 1968*a* for discussion and detailed citations. The basic outline is well established and comparable for the plurals in its security; see table 1.5.

Metathesis greatly affects the forms of these pronouns for the group of languages (Telugu-Kui) in which it is important. It can lead to complete reversal of the initial elements. See table 1.5 for examples of this and the following points.

131.31 The first person singular form is Proto-Dravidian **yān* with an oblique **yan*. The *ya* sequence in the oblique is unstable and always simplifies to *e* (i.e., [ye])²⁰ or to *a*. The nominative commonly picks up an initial *n*, presumably from contamination with the first person inclusive plural, **nām/nam*. This re-

sults in forms with initial *n̄* and *n* often in variation; Old Tamil cites all three: *yān̄*, *nān̄*, *nān*. The *n*-initial forms tend to gain at the expense of the others. The exclusive plural takes the regular pronominal plural *-m* on the same stem, **yām/ya*m and undergoes similar changes. The inclusive plural has an initial *n*- on the same base form, **nām/nam*.²¹

131.32 The second person singular pronoun is Proto-Dravidian **nī(n̄)* with an oblique **ni(n̄)*. It is unclear if the nominative had a final nasal or not. The plural is clearly Proto-Dravidian **nīm/nim* showing the usual pronominal plural, but this form often has other plurals, particularly the human plural, *-r*, added; cf. Ta *nīr*, NTa *nīṅkaḷ*.

131.33 The resumptive pronoun, Proto-Dravidian **tān/taṅ*, functions as the third person of the personal pronouns. This form is used when a noun, usually the subject, is repeated in a sentence. It is often called the reflexive, but it has a much wider range of usage than that name implies. These pronouns can also be used as emphatics immediately after their antecedent. This has led to the form *tān* being used commonly as a clitic in Dravidian languages; see section 130.32.

²⁰ The South Dravidian languages which make this shift always take onglides (since lost in most Malayalam dialects), i.e., [y] is automatically inserted before an initial *e*. Thus, except for the minor vowel shift, there has been no change in the phonetic reality. It has only changed in its interpretation.

²¹ Krishnamurti (1968*b*: p. 194) reconstructs these forms with an initial *n̄*-, i.e., PDr **nām/nām* to take care of some problems in Central Dravidian. However, this is not necessary and creates problems elsewhere; see Subrahmanyam, 1970: p. 6 for a detailed criticism.

TABLE 1.5

Proto-Dravidian Personal Pronouns and Their Reflexes

	PDr	OTa (NTa)	Te (O;N)	Kui	Parji	Kurux	Brahui
1s 'I'							
Nom	*yāṇ	yāṇ (nāṇ)	ēnu; nēnu	ānu, nānu	ān	ēn	ī
Obl	*yaṇ	eṇ	nan, nā	nā	an	eng	kan
Poss	*y-	y-					-ka
1pex 'we'							
Nom	*yām	yām	ēmu; mēmu	āmu, māmu	ām	ēm	—
Obl	*yam	em	mam, mā	mā	am	em	
1pin 'we'*							
Nom	*nām	nām	manamu	āju**	—	nām	nan
Obl	*nam	nam	mana	mā**		nam	nan
2s 'you'							
Nom	*nī(ṇ)	nī	īvu; nīvu	īnu, nīnu	īn	nīn	nī
Obl	*niṇ	niṇ (uṇ)	nin, nī	nī	in	ning	nē, n-
Poss	*ñ-	ñ-					-ne
2p 'you'							
Nom	*nīm	nīm, nīr	īru; mīru	īru, mīru	īm	nīm	num
Obl	*nim	num (um)	mim, mī	mī	im	nim	num
3s 'self'							
Nom	*tāṇ	tāṇ	tānu	tānu	tān	tān	tēn
Obl	*taṇ	taṇ	tan	tan	tan	tang	tēn
Poss	*t-	t-					-ta
3p 'selves'							
Nom	*tām	tām	tāmu	{ tāru (m) tāi (n)	tām	tām	tēn
Obl	*tam	tam	tam	tāran	tam	tam	tēn
Poss							-tā

*Krishnamurti (1968:p.195) reconstructs PDr *ñām/ñam to explain certain vowel shifts in Telugu-Kui. The problem with this is that the *ñ is not attested in Tamil or Malayalam which normally retain this consonant.

**These forms are innovations and are not cognate. Such forms will always be in italics in the tables.

Ta *pacu taṇ kaṇṇōṭu pōyīṛru*.

The cow₁ went₄ with₃ her own₂ calf₃.

nāṇ tāṇ pōṇēṇ.

Only₂ I₁ went₃.

The plural is formed in the usual pronominal fashion with -m, *tām/tam. See table 1.5.

131.34 **Possessive clitics.** In most Dravidian languages the oblique base functions as the possessive. However, Old Tamil has a few forms where personal

possessions were indicated by prefixes (proclitics).²² These forms were *y-* 'my', *ñ-* 'your', and *t-* 'his, her, etc.'; see table 1.5. They are attested with words such as OTa *āy* 'mother', i.e., *yāy* 'my mother', *ñāy* 'your mother', and *tāy* 'his/her mother'. The forms in *t-* become generalized as the norm, cf. NTa *tāy* 'mother'. These forms in *t-* and occasionally the other consonants are attested elsewhere in Dravidian: Ta *ampi*: *tampi*, *nampi*, *empi* (<**yampi*) 'younger brother', Kui *ambesa*, *tambesa* 'id'. (DED 2513). Brahui also uses possessive clitics, but they follow the noun: *-ka* 'my', *-ne*, 'your', *-ta* 'his, her, its', *-tā* 'their'. These possessive clitics clearly are variants on the personal pronouns.

131.4 Appellatives

131.40 The appellatives consist of a set of personal endings which may be added to any noun or verbal to indicate person with these forms (see the general introduction in section 030). Appellatives may function as predicates or as proforms in the widest sense. When added to the deictic-interrogative stems, they form the equivalent of third person pronouns throughout Dravidian; see Zvelebil, 1977: pp. 38–39. Although they exist in three persons and in both numbers, appellatives have always been most common in the third person; see table 1.6.²³ The appellatives which are built on verbals and function as predicates are the major exception. First and second person forms built on nouns are rare and often uncited in many languages. However, it is clear that the system applies to all Dravidian languages and to Proto-Dravidian. See Israel, 1975 for a detailed discussion.

131.41 The deictic-interrogative (hereafter deictic) stems indicate the physical relationship of the referent to the speaker. Interrogatives asking for information (wh- questions) are definitely a part of this system in Dravidian. These stems are phonologically unusual in that they are all monosyllabic and end in the reflexes of Proto-Dravidian **H*. This is the only clear example of **H* in Proto-Dravidian phonology; see Krishnamurti (1963: pp. 557–558) for details. While provisional, this notation is being used here to cover a set of variants. The **H* regularly disappears, assimilates, or becomes *v* (especially in South Dravidian). Vowel length is variable, but basically seems to be short.

²² These are the only true proclitics or prefixes in all of Dravidian. The appellative pronouns are best analyzed as being on a deictic base rather than as having proclitics.

²³ Only Kui has a full set of deictic appellatives in all three persons: *eanu* 'that-I', *iati* 'this-you', etc. See Winfield, 1928: p. 92.

The most basic and widely attested deictics are proximate **iH* 'here', remote **aH* 'there', and the interrogative **yaH*/(**eH*) 'where'. Although sometimes modified, they are widely attested throughout the Dravidian languages. A second group is much more restricted and confusing. Basically, it consists of **uH* 'near you', **HuH*/**oH* 'extremely remote, out of sight', and **cē* 'distant'. They have often become confused (even in the DED) with each other and with the basic deictics. However, by using data from Old Tamil, Kui-Kuwi, and Kurux, I have been able to show that they were quite distinct forms. See Israel, 1977 for a detailed, but slightly different, analysis. I keep **uH* 'near you' as distinct from **HuH* 'far away'. Israel considers the former a variant of the latter and was the first to analyze **cē*. Also, forms with *n*'s, such as the *na-*, *ni-* of Malto, seem to be directly influenced by contiguous Munda languages and are not to be reconstructed for Proto-Dravidian.²⁴ Thus, the deictic series for Proto-Dravidian is to be reconstructed as **iH* 'here', **uH* 'near you', **aH* 'remote (in sight)', **cē* 'distant', **HuH* (**cu*?) 'out of sight'; and the interrogative **yaH*/(**eH*).

When the appellative third person endings are added to these stems, forms such as these for Tamil result (*h* > *v* or *k* (*āytam*) in South Dravidian):

	that:	this:	which:
he	<i>avaṇ</i>	<i>ivaṇ</i>	<i>evaṇ</i>
she	<i>avaḷ</i>	<i>ivaḷ</i>	<i>evaḷ</i>
it	<i>a(k)tu</i>	<i>i(k)tu</i>	<i>e(k)tu</i>
they (h)	<i>avar</i>	<i>ivar</i>	<i>evār</i>
they (n)	<i>avai</i>	<i>ivai</i>	<i>evai</i>

General interrogatives, such as Ta *yār* 'who' and *eṇṇa* 'what', also exist.

131.42 **Other Appellatives.** The appellative endings can occur on nouns: nominatives, obliques, and genitives. These are widely attested in Dravidian and are certainly reconstructible to Proto-Dravidian; see Israel, 1975. Examples on a nominative include: OTa *kōṇēṇ* 'king-I', *kōṇēm* 'king-we', etc., MTa *aṭiyēṇ* 'foot/base-I', i.e., 'your most humble servant', Kur *ālan* 'man-I', *ālas* 'man-he, the man'. Examples on the oblique include: OTa *kaṇṇēṇ* 'of the eyes-I', *kōṇiṇēṇ* 'of the king-I', *tamar* 'their own men', *ema* 'our things', Kui *nāʔanju* 'my man', *nāndi* 'my thing'. These appellatives are also used on adjectives (compounding bases), numerals, and adverbs, and also on other appellatives. Examples on adjectives include OTa *nalēṇ* 'good-I', *nalla*

²⁴ Personal communication from Ram Dayal Munda. These Munda languages have a regular pattern of deictics in *n-*.

TABLE 1.6

Part A: Third Person Appellative Endings

Part B: Third Person Deictic Appellatives

A	Tamil	Telugu	Kui	Konda	Parji	Kurux	Brahui	PDr
3sm	-an	- <u>ṽ</u> du	-anju	- <u>n</u> ru	-(o)d	-s	-d	*-anrə
3pm/h	-ar	- <u>v</u> ru	-aru	-r	-(o)r	-r	---	*-ar
3sn	-tu	- <u>ṽ</u> di	-ri	-d	-d	-d	-d	*-tə
3pn	-(v)ai	- <u>ṽ</u> vi	-vi	-k	-v	-bṛa	-fk	*-və
B								
3sm	avan	v <u>ṽ</u> tu	aanju	v <u>ā</u> ru	ōd	ās	od	*aHanrə
3pm/h	avar	v <u>ā</u> ru	aaru	v <u>ā</u> r	ōr	ār	(ofk)	*aHar
3sn	a(k)tu	adi	ari	v <u>ā</u> d	ad	ād	od	*aHtə
3pn	avai	avi	avi	v <u>ā</u> k	av	abṛā	ofk	*aHvə

'good things', Kur *koh-an* 'great-I', *koh-ā* 'great-it/she'. Examples of other constructions include: OTa *avanar* 'there-they' (adverb), Kur *ayyatan* 'of that place-I' (oblique), OTa *avara* 'of them (human)-things' (other appellative). See also sections 030 and 131.5 for numerals.

131.43 Appellative endings are productive of functioning predicates when added to verbals. These regularly enter the verb system with the collapse in interpretation of 'it is the one which walked' to 'it walked'; Ta *naṭantatu* for both. These can be regularly spotted by the similarity of personal verb endings to the pronouns, both personal (and especially oblique form) and appellative. See Winfield, 1928: pp. 90–94 for examples from Kui. See table 1.10 for attested forms which, while functioning as verbs, can clearly be traced to the appellative system. See section 132.43 for further discussion of these endings in the verb system.

131.5 Numerals

131.50 The system of numerals is one of the most closely studied in Dravidian: see Shanmugan, 1971: pp. 141–174 for details. Also see Zvelebil, 1977: pp. 33–36; Emeneau, 1957; and Andronov, 1976a. They are among the few forms that have anything looking like an adjective in Proto-Dravidian. An invariant compounding base is readily reconstructible for one through eight; see sections 130.31 and 131.202. These compounding bases are used to give the higher numerical bases—tens, hundreds, and thousands. These numerical attributes often vary as to vowel length, being conditioned by the phonological nature of the following noun. Besides the compounding base, numbers regularly have two full nouns (three for 'one'), one for humans and one for things. These nouns are old appellatives (derivatives) and regularly consist of adding the human plural *-ar* to 'two' through 'eight' and the neuter *-tə* to the others

(except 'four', which has *-ku*). The neuter nouns tend to replace all other forms and become the adjectival form.

131.51 The Dravidian numerical system emphatically functions in base ten. However, there are remnants of a base eight system; see Zvelebil, 1977: p. 36. The compounding bases stop at eight. The root for 'eight' **eṇ* is the same as the root for 'count' and 'number' (DED 678). There are possibly remnants of base eight in fractions which tend to go $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{16}$, $\frac{1}{64}$, but only $\frac{1}{2}$ and $\frac{1}{4}$ are clearly old.

Nines are a tremendous problem. 'Nine' itself is **onpatu* (<**on* 'one' + **paHtu* 'ten') or derived from **toḷ*. 'Ninety' and 'nine hundred' are rendered by the stem **toḷ* plus the word for 'one hundred' and 'one thousand'. *Toḷ* means 'the one before' (in a series). 'Ten' is regular, but does not have a simple compounding stem; the genitive is used instead. 'One hundred', **nūru*, is clearly Proto-Dravidian; 'thousand' is a loan word.

131.52 The Proto-Dravidian forms for 'one' are archaic and complex. There are two basic stems, **or* and **on*, and a related one, **okka*. The form **or* is used as an attribute and to form the human nouns, **oruvanṛa* 'one man' and **orutti* 'one woman'; **on* is used to form the neuter noun *onṛa* (*on* + *tā*) and a derivative stem **onṛr-*. Emeneau (1957: p. 4 [1967a: pp. 141–142]) argues that **on* is basic and **or* is influenced by the following **ir* 'two', but the matter is not certain. Andronov (1976a: p. 5) argues persuasively that the PDr **ol* is the basic form using verbs like TaMa *ol-* 'unite' as examples. In this argument forms in **on* are due to sandhi, while **or* is due to the influence of **ir*. The forms for 'two' are regular except that the neuter noun has the augment *-aṇ-*. 'Four' has a long vowel and irregularly takes *k* rather than *t* for the neuter noun. 'Seven' seems to take no ending at all for its neuter noun. Otherwise the system is straightforward and regular. See table 1.7 for details.

132 The Verb

132.0 The verb has a central place in the grammars of all Dravidian languages, derivationally, morphologically, and syntactically. The Latin meaning has rarely been more apt; the verb in Dravidian is indeed *verbum* 'the word'. The structure of the typical Dravidian verb is a complex combination of agglutination and inflection. The overt synchronic structure tends to two simple formats. In the first, the verb stem is followed by a medial, which is in turn followed by an ending. These three components are strung together in a straightforward agglutinative

manner. The structure within them, however, is often anything but transparent. Also, this structure tends to be defined from the ends. The verb stem is normally quite distinct and can always be recovered with a minimum of difficulty. It is common to all the forms of a given verb. The endings are a well defined set, usually common to all appropriate verb forms. Thus, the same set of personal endings is normally used for all finite tenses. However, all the forms after the stem and before the endings are, by definition, the medials. They do not have any particular structure or function and are best described with this colorless phrase. As might be expected, this is where the work of comparative morphology needs to be done most. In the second case, the verb stem is followed by a single set of morphemes which may have some parallels with endings, but usually more closely correspond to the medials. This type of structure is common for core verbals, such as the imperative and some participles. In terms of the above analysis, they consist of the verb stem followed by a unitary medio-ending.

132.01 **Verb bases.** In certain cases, however, there is a more complex interaction between the verb stem and all or part of the medial (or medio-ending). Due either to complex morphophonemics (sandhi) or to elaborate allomorphy (conjugational variants), or both, the medial may functionally fuse with the verb stem. Similarly, there may be other phonological readjustments, such as vowel loss or insertion and cluster simplification, between the verb stem and the following morpheme. In these cases, it is better synchronically to describe both the fusion of stem and medial, and the stem with its alterations, as a verb base. In this type of analysis, all of the complications, i.e., all of the inflection, complex sandhi, and polysynthetic fusion take place within the verb base. After the verb base, all of the morphology is uncomplicated agglutination.

Thus in Modern Literary Tamil, the abstract analysis has the universal model of verb stem + medial + ending. However, the functional analysis works on three verbal bases: a past, an imperative, and an infinitive. The past base consists of the verb stem plus the past medial, which is morphologically conditioned and phonologically assimilated. The imperative base includes a set of vowel insertions (usually *u*) used in the imperative, and located before the "present" and "future" medials. The infinitive base includes both phonological changes (loss of *u*) and the addition of the infinitive medial (*kk*, \emptyset). These bases appear to be real for Tamil speakers. A great deal of morphological variation which, on its face, seems complex and unmotivated (note the Old Tamil example

Table 1.7

Proto-Dravidian Numerals

Num.	Compounding		Nouns		Others, Comments
	Base	Variants	Human	Neuter	
1 a	or	oru, ōr	oruvanrə (m) orutti (f)		PSDr *orumay 'oneness'
b	on			onrə	PSDr *onrray 'one of a pair'
c	okka		okkanrə		dominant in CDr
d	ol				to 1b (?)
2	ir	iru, īr	iruvar	iranṭə	PDr *iranṭṭay 'double'
3	mu(N)	mū, muC	mūvar	mūnrə	PDr *muppatə 'thirty'
4	nāl	nāṇ		nālkə	
5	cayN	cayn		cayntə	
6	cārə	carə		cārə	
7	ēz	ēzu, ezu		ēzə	
8	eṇ			eṇṭṭə	cf. *eṇ 'to count; number'
9 a				onpatə	cf. 1b and 10
b	toḷ	toṇ			only in higher numbers
10	patə	patiṇ, paṇ		pattə	PDr *paHtə ?
100	nūrə	nūrrə	nūrruvar	nūrə	

in section 130.2) is describable simply as a change in base. This can allow sweeping generalizations of the form, "Old Tamil forms negatives on the stem while Modern Tamil forms them on the infinitive base." In other words, while the stem + medial + ending model is accurate and certainly diachronically useful, it does not capture all the operations of synchronic grammar. It may leave much insight out of its simplistic grasp. However, little detailed close re-

construction of verbal morphology has been done to date.²⁵

²⁵ The only works which have seriously attempted detailed comparative verbal morphology while paying attention to specific verbs are *Telugu Verbal Bases* (Krishnamurti, 1961) and "The South Dravidian Languages" (Emeneau, 1967b). *Brahui and Dravidian Comparative Grammar* (Emeneau, 1962) studies a small group of irregular verbs closely.

132.02 Thus, when discussing the Dravidian verb three words should be kept distinct. A verb root is the common portion shared by several verbs or other words, often among languages. It is normally monosyllabic; see section 122.2. A verb stem is the morpheme for any specific verb in a specific language. It commonly consists of a root plus an augment and is bisyllabic. It may, however, consist of a single root or of compounded forms. A verb base consists of a verb stem fused with other morphemes which tends to function as a unit synchronically in a given language. It may provide insight into the basis for diachronic change.

132.1 Verbal Derivation

132.10 As discussed in section 122.1, the primary augment for both nouns and verbs in Dravidian consists of a syllable (${}^2V_1 {}^3C_0^2$) added to the root, which in this case always has a light form (${}^1C_0 {}^1V_1 {}^2C_1^1$). This creates the verb stem. The short derivative vowel (2V_1) must be *a*, *i*, or *u*. When used alone (i.e., ${}^3C_0^2$) the vowel *i* is common as a derivative, but has no discernible meaning. Similarly, the vowel *a* is complex in that it seems to be part of the verb stem in some cases; see footnote 9, section 122.0 on *CVCa* stems. When 2V occurs with 3C , the vowel is largely conditioned by phonological factors. There are certainly no contrasts hinging on vowel quality. This type of conditioning is clearest in such cases as the Telugu verb, where 2V is in harmony with the following vowel: *Te todag* 'wash', *toḍigindi* 'it washed', *toḍugutundi* 'it washes', *toḍagadu* 'it (does) not wash'.

With a few exceptions, it is not possible to assign any meaning to these derivative suffixes. A few are fairly well understood, some come from barely perceived patterns, others have distinct internal patterns (such as the Tamil-Kodagu weak/strong contrast; see section 132.133 below), but for most there simply is no adequate explanation at present. This is true derivation, essentially arbitrary, not regular morphological patterning. The ones which can be meaningfully discussed will be covered in the following sections.

The augments to the Dravidian verbal root come in two types. The first is the primary augment (${}^2V_1 {}^3C_0^2$) which is truly derivative and for which it is often difficult to assign any specific meaning. Of the large number of these, only a few can be discussed in any meaningful detail. There are four identifiable verbal augments: Vr_1 , Vr_2 , Vl , Vz . In addition, there are secondary augments of the form (${}^3V_0 {}^4C_0^2$), which tend to be much more regular and

pseudomorphological. The most important, by far, are the causative formations.

132.11 Primary Augments

132.111 The voice derivative, Vr_1 , is by far the clearest. In Kurux and Malto, it is a productive suffix where it forms the "intransitive" marker: Kurux ?es- 'to break', ?esr- 'to be broken'. Malto has *-r*, but also *-Gr-*, for this usage. In South Dravidian and Telugu verb stems, i.e., the ones which have been studied, affective (that is, subject oriented, non-causal, nonagentive, usually intransitive; see section 132.1311) verb stems tend to have a highly disproportionate number ending in *-r*, which is otherwise extremely rare. We can fairly safely reconstruct a Proto-Dravidian augment $*Vr$ for an affective/nonpassive/nonagentive meaning. The augment $*Vl$ is much more uncertain. It functions in South Dravidian with the affective stems much like $-Vr_1$. There is no perceptible difference of pattern.

132.112 The other augment of similar form, $*-Vr_2$, is considerably sketchier. It means action directed towards the speaker or the person addressed, and thus varies with the person of the indirect object. This function is best attested in the Kui group where it is involved in what are called for Kui "transition particles" (Winfield, 1928: pp. 101–111). Recent reinvestigation by Emeneau (1975: pp. 22–23) has shown this usage is probably a result of a collapsed periphrastic construction on the verb *tā(r)* 'to give'. But even so, *tā(r)* manifests the phenomenon. In South Dravidian two verbs *vā(r)* 'come' and *tā(r)* 'give (to me/you)' show this phenomenon. Both have variants with and without the *-r*, making them two of the rare double-stemmed verbs. Both mean action to first or second person and both have other verbs to pick up the third person usage. Malayalam *vā(r)* 'come here', *cel-* 'reach a place not here', i.e., 'come there' (cf. *pō(k)-* 'go', i.e., 'leave here'); *tā(r)-* 'give to me/you', *koṭu-* 'give to him'. The argument for this augment is tentative, but I would maintain it.

132.113 The fourth augment, $*-Vz$, is also weakly attested. Its possible meaning comes only from South Dravidian where verb stems ending with it have a noticeable tendency to have meanings for 'round' or 'rolling', or possibly 'down'. It is tentative, but more sure than most.

132.114 Other derivatives certainly exist and form strong patterns. Unfortunately, we can attach no meaning to them. These are best studied in South Dravidian and my own work has concentrated on Mala-

yalam.²⁶ Of the slightly over two thousand Dravidian verb stems in Malayalam, half are bisyllabic and short-voweled (i.e., $^1C_0^1V_1^2C_1^2V_1^3C_0^3$). Classified by augment ($^2V_1^3C_0^3$), *-Vr* ends 10 per cent, *-Vl* ends 2 per cent, and *-Vz* ends 1 per cent. Other significant augments are the vowels alone, *-i* (20 per cent), *-u* (5 per cent), *-a* (3 per cent), and *-ay* (20 per cent). Obstruent augments include *-Vl* (3 per cent), *-Vmp* (3 per cent), *-Vtt* (*tt*, *rr* [the causative, see section 132.134], 7 per cent), and the velars *Vk*, (*kk*, *γγ* [*<γk*], 23 per cent). Thus, the truly major remaining augments attested in Malayalam are (1) the vowel *i*, (2) *ay*, and (3) the velars (*Vk*, *Vkk*, *Vγγ*) along with the causatives in *tt* and its assimilated variants. Data from elsewhere in South Dravidian would support this with perhaps a little more emphasis given to the labials (*Vmp*, *Vpp*).

132.12 **Secondary augments.** Secondary augments are discernible by their somewhat more predictable structure, clearer meaning, and that they commonly follow primary augments. They may pile up on one another. Leaving aside the causatives, the secondary augments are largely restricted to the plural-action augments. These augments are productive in the Kui group, where they indicate plurality of the verb itself, but not necessarily of the subject. Thus, they can be used to indicate iteratives, multiple subjects, or any such combination. The forms are based on **-kk-*, **-pp-*, and **-p-* (*>b>v*); see Emeneau (1975: pp. 3–18). While productive only in Kui and its close relatives, Emeneau has found numerous reflexes of this augment in other branches of Dravidian (1975: pp. 10–18). The other augments found in the Kui group have been traced to periphrastic verb construction and are not relevant to Proto-Dravidian morphology. See Emeneau, 1975 for a discussion of these augments.

132.13 Agentivity (Causatives)

132.130 Typical of all Dravidian languages is a set of lexical alternations which indicate a set of shifts called “transitive” and “causative,” although these terms are largely misnomers. What seems to be involved is a shift in the degree of agentivity, i.e., indication of the number of the rational beings who

are the instigators of a verbal event, but who are not directly affected.²⁷ It corresponds closely to concepts of sentence focus and the Fillmorean term “agent,” although there are differences; see Krishnamurti, 1971 for a related discussion. Agentivity occurs in degrees, zero degree agentivity has no outside instigator (agent), first degree has one, second degree has two, and so forth. Within this framework there are many distinctions.

132.131 A really adequate beginning to our understanding of this process has come only in the last few years with K. Paramasivam’s dissertation on this subject (1977, University of Chicago; published as Paramasivam, 1979). For Modern Tamil, without comparative data, he describes three degrees of this process: (1) affectives, (2) effectives, and (3) causatives.

132.1311 **Affectives.** In the zero degree, called *affective*, the subject is nonagentive and primarily receives the action of the verb, i.e., the verb **affects** the subject.

(1) kuṭam uṭaintatu ‘The pot₁ broke₂.’

(2) rāmaṇ vantāṇ ‘Raman₁ came₂.’

These forms are commonly, but not always, intransitive. When transitive, the action of the verb focuses on the subject. The examples are from Paramasivam, 1979: p. 85ff.

(3) avaṇ maṇaiyiyaip pirintāṇ.

He₁ left/separated from₃ [his] wife-acc.₂

(4) māṭu pullai mēyntatu.

The cow₁ grazed₃ [on] the grass-acc.₂

These verbs are often translated by a passive verb in English, but they are not formally passive.²⁸

132.1312 **Effectives.** In the first degree, called *effective*, an agentive subject is added and the verb is transitive. The action of the verb focuses on the object, i.e., the subject **effects** the object.

²⁶ Out of the 1,080 verb stems given in the appendix to Volume I of the *Malayalam Lexicon* which have this form, the following are the actual counts for the augments: *-i* (203), *-ay* (215), *-Vr* (100), *-Vl* (19), *-Vz* (13), *-Vl* (19), *-a* (33), *-u* (50), *-Vk* (47), *-Vkk* (103), *-Vγγ* (99), *-Vr* (27), *-Vtt* (30), *-Vtt* (31), *-Vrr* (11), *-Vmp* (30), *-Vv* (10), others (<10) (40). These are crude counts which do not take assimilations and morphological processes into consideration.

²⁷ This use of the term *agent* should not be confused with its use in agent/patient contrasts. While very similar to Fillmore’s (1968) use of the word, a major difference is seen in cases like Ta *avaṇ vantāṇ* ‘he₁ came₂’, which would be an agent for Fillmore, but not in this case of the term. The meaning is much closer to that normally meant in English by the term “agent” in that the person is not directly involved in the action of the verb.

²⁸ A passive verb is a transformation of a transitive verb. Affectivity can apply to verbs which cannot be transitive: *rāmaṇ vantāṇ* ‘Raman₁ came₂’. The two processes are complementary, however, and Tamil has little need for a passive due to its agentives. A formal and true passive exists due to Sanskrit and English influence, but it is little used in normal contexts.

- (5) *nāy kuṭattai uṭaittatu.*

The dog₁ broke₃ the pot-acc.₂

- (6) *avaṇ māṭṭai mēyttāṇ.*

He₁ grazed₃ the cow-acc.₂

Paramasivam (1979: pp. 114–122) argues conclusively that the affective to effective shift is not a causative or in any way a syntactic pattern. Rather it is a systematic lexical derivational pattern. Normal syntactic constraints do not apply.

132.1313 **Causatives.** However, if one more agent is added, a true syntactic causative in *vi* or *ppi* is formed. A morphological, lexically determined causative exists in two different sets: (A) one with indirect loose causation and (B) one with direct tight causation; see Paramasivam, 1979: pp. 123–137.

- (7) *A. cōṣaṇ taṇcāvūr-k kōvilai-k kaṭṭuvittāṇ.*

The Chola king₁ had (x) build₄ the Tanjore₂ temple-acc.₃

- (8) *B. avaṇ eṇakku inta viṣayattai-t terivittāṇ.*

He₁ informed (caused to know)₅ me-dat.₂ [of] this₃ matter-acc.₄

Indirect periphrastic causatives are also common and productive.

- (9) *eṇṇai-k kōpappaṭa vaikkātē.*

Do not make₃ me-acc.₁ get angry-inf.₂

132.132 Paramasivam's work, while extremely enlightening, is not comparative and problems remain on an all-Dravidian level. Specifically, languages such as Malayalam have greatly developed the agentivity series, adding morphological double causatives (third degree agentivity) and tending to merge the morphology of the effectives and the causatives. Thus, on the root *vā(r)*- 'to go' Malayalam has *varika*, *varuttuka*, *varuttikkuka*, and *varuttipikkuka* with increasing, if overlapping, agentivity. At the moment, it cannot be clearly said what is innovation and what is retention; see Subrahmanyam, 1965 and 1971: pp. 50–101 for views on this. It is not clear how the affective/effective system interacts with the causatives and with agentivity, or even if agentivity is the appropriate framework for comparative work.

132.133. **Weak/strong contrast.** In the Tamil-Kodagu group there is a major morphological contrast in those verbs known as weak and strong. Strong verbs geminate the initial obstruents of morphemes immediately following the verb stem. Weak verbs do not geminate these obstruents, which in fact often weaken (*p > v*) or are lost entirely (infinitive: strong *-kka*,

weak *-a*). This contrast is phonologically conditioned for some verbs and lexically controlled for others. These lexically controlled verbs, which have sonorant final stems, use the weak morphology for their affective form and the strong morphology for their effective form. Thus, for these verbs weak/strong parallels affective/effective. The linkage is so tight that sloppy usage uses weak to mean affective and strong to mean effective. The weak/strong variation indicates nothing in the phonologically conditioned verbs. Obstruent finals are always weak, and a small group, usually ending in *-a* (for Tamil, Graul's class 7) is weak in its past morphology and strong elsewhere.

132.134 In Tamil-Kodagu the affective/effective shift has a complex manifestation. The details of the following argument are from Tamil-Malayalam, but it applies in principle to the whole group. It is found nowhere else in Dravidian; see Subrahmanyam, 1971: pp. 95–99 and Paramasivam, 1979: pp. 74–86 for examples and discussion.

Briefly, there are three patterns in which the affective/effective contrast is obtained, depending mainly on the shape and the ending of the verb stem.

	<i>Affective</i>	<i>Effective</i>
1. Obstruent finals	(C)P NP	PP PP (<*NPP)
2. Sonorant finals	<i>Weak:</i> past <i>-nt-</i> inf. \emptyset	<i>Strong:</i> past <i>-tt-</i> inf. <i>-kk-</i>
3. <i>-a</i> finals ²⁹	stem	stem + <i>tt</i>

First Person Singular Pasts

1. *ōṭ-* 'run', *ōṭṭinēṇ* 'I ran', *ōṭṭinēṇ* 'I drove'
2. *vaṭar-* 'grow', *vaṭarntēṇ* 'I grew', *vaṭarttēṇ* 'I raised'
3. *naṭa-* 'walk, happen', *naṭantēṇ* 'I walked', *naṭattinēṇ* 'I directed'

Out of this variation, one underlying marker for the effective emerges. This basic morpheme *-tt-* is seen in a straightforward way in group 3. In group 1, it has been assimilated by a normal phonological process into the final obstruent cluster (*t + tt → ttt →*

²⁹ Group 3, *-a* final stems, vary between weak and strong morphology. They are weak in the past base and strong in the imperative and infinitive bases. They have been analyzed (McAlpin, 1973: pp. 369–370) as basically weak, but with the special proviso that obstruents geminate after *a*, a rule used elsewhere in the phonology. There are no verb stems in *-a* with single obstruents following in Malayalam.

Group 3 also includes a small, highly irregular group of verbs which truly vary weak/strong, with a weak past in *-nt-* and strong morphology elsewhere. It is highly significant that the three verbs involved, *niṭ-* 'stand', *iru-* 'sit', and *kiṭa-* 'lie down', are the only three verbs that are inherently durative in Tamil-Malayalam. All other verbs are inherently punctual. Thus, there is some sort of semantic control of morphology involved here.

tt, etc.). Hence, it is the underlying cause of the consistently tense obstruent of the effective for this group. In group 2, the causative *-tt-* has fallen together with the past marker *-(n)t-*, $(n)t + tt \rightarrow (n)tt \rightarrow tt$, and has been reanalyzed as a tense marker. Thus, it was among the origins of the weak/strong system. The nasal seems to be an analogical extension; see Paramasivam, 1979: pp. 77–78. Thus, all of the variations for the effective in Tamil-Kodagu can be traced back to **-tt-*. This morpheme and the group 1 type of assimilation and alternation are seen elsewhere in Dravidian; see Subrahmanyam, 1965 and 1971: pp. 51–90 and note Kurux *ʔestāʔa* ‘to cause to break’, etc. Thus, there is little doubt that **tt* is a reconstruction for Proto-Dravidian. There is only the problem of whether it was originally an effective or a proper causative formative.

Similarly, there seems little trouble in reconstructing a causative PDr **pi* (*vi*, *ppi*) as a true causative. Although less commonly attested, it does occur widely in Dravidian languages; see Subrahmanyam, 1971: pp. 90–95.

132.1341 P. S. Subrahmanyam (1971: pp. 68–74) points out that in the Tamil-Kodagu affective/effective sets with labials (*-mp/-pp*), the form in *-pp* is often widely attested in Dravidian while the form in *-mp* almost never is. He argues that the form in *-pp* is the older, and that the form with the nasal (*-mp*) is an analogical extension. This extension was formed after the general rule of NP:PP was established in South Dravidian, based on patterns originally found in velar and dental suffixes. It should be mentioned that Bh. Krishnamurti disagrees with this position; see section 132.23. However, it seems to me that Subrahmanyam has a very good argument here.

132.1342 In a similar vein, Subrahmanyam (1965: pp. 564–565) has argued that among velar augments in verb stems, the *-kk-* form seems much more widely and consistently attested than the forms for a single *-k-* or for *-ŋk-*. Widespread reflexes for these latter two exist, but they do not tend to pattern consistently. In any case, **-k-*, **-ŋk-*, and **-kk-* are important augments for Proto-Dravidian. Note that these velar augments get involved with the Tamil-Kodagu infinitive base much as the effective did with the past.

132.1343 Taking all of this information together, it is fairly clear that there was a major innovation in verbal augments and morphology at the Proto-South-Dravidian stage which led to the weak/strong system. This has been largely lost in Kannada, has taken a somewhat different manifestation in Tulu, and has been best preserved (extended?) in Tamil-Kodagu, which has a very consistent pattern. Parts of this

morphology are attested elsewhere in Dravidian, but the system is not.

There is a tendency among many Dravidianists (Subrahmanyam, Zvelebil, etc.) to base their analyses of Proto-Dravidian verb morphology on the model of South Dravidian and particularly that of Tamil. Considering the evidence for innovation at the Proto-South-Dravidian stage, I do not think this is a wise policy. It is unlikely that Proto-Dravidian is just like Tamil only more so.

132.14 For Proto-Dravidian there is the rough outline of a system in the augments. There seems to be a medio-passive in **-Vr*, an effective (causative?) in **-tt-*, and another causative in **-pi*. These seem to be part of a system. Other major but indeterminant augments are *-(k)k-*, *-ay*, and *-i*. In addition, there is a nasal *-n*, which perhaps is better placed with the augments, though the process, usually analogical, is a complex one.

132.2 The Finite Verb

132.20 The typical finite verb in a Dravidian language consists of a verb stem + medial + personal ending. The stem, which is the verb root plus any augments, has been discussed in section 132.10. The personal endings usually entail the same system for any specific language, and are normally connected with the appellative system; see section 131.4. However, it is the medials which require the most comment in the Dravidian verb. As opposed to the rest of the grammar, they do not have an agglutinative internal structure. They tend to be cohesive units which have extremely complex usages and meanings. Instead of serial tense, aspect, and mood markers, they are coherent tense-aspect-mood (TAM) markers. They can be labeled, but outside the context of a specific dialect, meaning and use can be ambiguous. Thus, medials are especially uncertain as a system in comparative work.

132.201 The most extensive work on Dravidian verbal morphology, particularly the medials, is *Dravidian Verb Morphology* by P. S. Subrahmanyam (1971). This book is a vast catalog of verbal forms grouped by their medials (and other verbal bases) with comparative discussion. In spite of a tendency for everything to function as everything (past markers: $(t)t$, nt , i , c , k , n ; nonpast markers: $(p)p$, $(k)k$, t , m , n , o , etc.) and points of analysis that this writer and other Dravidianists would disagree with,³⁰ this book

³⁰ There are no cohesive schools of thought on comparative Dravidian grammar. The alignment of Dravidianists *pro* and *con* shifts with every different point. While there is a working con-

clearly established the outlines of verbal morphology. It set up the framework of what is agreed upon, within which confusion reigns. The result is a structural outline (or grid) that all Dravidianists can live with, if not enthusiastically support.

132.202 This system outlines three medials (i.e., sets of TAM markers) for Proto-Dravidian. These are largely arbitrarily labeled: Past, Nonpast, and Negative. The "past" medials deal with positive past time, completive aspect, indicative mood, etc. As far as the underlying system in the Tamil-Kodagu group can be safely extrapolated, "past" forms are used when a situation is specific (with a definite location in time and space) and real (true to the best of the speaker's knowledge). Tense and aspect indications seem to be quite secondary, if present at all. The vast majority of specific and real statements will, in fact, be past, and hence, tense is gained by implication. "Nonpast" medials refer to positive distant future time, durative and habitual action, and subjunctive mood. From a Tamil-Kodagu point of view, "nonpasts" are nonspecific (habituals, far futures) or nonreal (modals, contrafactuals, etc.). The "negative" medial (often referred to as a negative tense) is used for all negative purposes. Theoretically, it applies to both positive medials, but in actual use always seems closer to the nonpast. This is supported by the tendency to create a new and specific past negative in the various subgroupings of Dravidian.

Through time, "pasts" tend to gain specific tense and aspect indications. "Nonpasts" tend to elaborate modal considerations, but often remain the unmarked form. True tense and aspect systems develop with the most common addition being a "present" which can come from either past (cf. Tamil) or nonpast (cf. Parji) morphology.³¹

The use of auxiliary verbs and other periphrastic systems is very common and extensive. With morphological loss and contraction, periphrastic constructions often end up indistinguishable from simplex ones. One of the more difficult problems is the separa-

tion of basic and derived morphology; see Bhat, 1976 for a discussion of this problem.

132.21 Attested Medials

132.211 The attested medials as given by P. S. Subrahmanyam (1971) are summarized in table 1.8. The first four past medials (*t*, *nt*, *tt*, *i(n)*) form a set of Tamil-Kodagu where they form conjugations on the basis of the phonological shape of the verb stem and the degree of agentivity.³² Kannada and Tulu have similar, if simpler, systems using the same markers. Telugu normally uses *-i(n)*; the rest of Telugu-Kui uses *-d/-t- (<*t/*tt)* as does the Kolami-Parji group. Kurux-Malto normally uses *cc(c,s)*, *kk(k,g)*, or both (*c + k*). Koraga inexplicably uses *-k-* throughout. Brahui has a few verbs in *-g-*, some in *-s-*, but most are formed in *-ā/-ē-*, which seems unrelated to the rest of Dravidian. The clearly dominant and most widely attested past medial is the dental *t* with *tt* and possibly *n(t)* and *-i(n)* as conditioned variants. The marker *-cc-* is probably a palatalized variant, but see also section 132.311 for other possibilities. The past medial *(k)k* is not widely enough spread to be a serious contender, but it remains an unexplained anomaly.

132.212 The nonpasts are somewhat simpler. South Dravidian basically has *(p)p*, which alternates in complex ways with *(k)k*; see the Old Tamil examples in section 130.2. In addition *-um* plays an important, if subsidiary, role usually in combination with *(k)k*. Central Dravidian primarily uses *(t)t* with alternates in *(k)k* and sporadic forms in nasals *-um/-n* (the norm in Parji). Kurux-Malto and Brahui primarily use *-o-* with sporadic forms in *-n-* (the norm for Koraga). The labials are essentially restricted to South Dravidian, the dentals to Central Dravidian, and the vowel *-o-* to North Dravidian. The most important, entrenched, and widespread of the nonpast markers are *(k)k* and *-n/-um*.

132.213 The negative medials are, by contrast, simplicity itself. All Dravidian languages which attest them have *ā*, *vā*, or a completely assimilated version (\emptyset). The protoform must be **ā*, which some languages, such as Kannada, have shortened to *-a* and

sensus in many areas, I would not want to hazard a statement that all Dravidianists have agreed on a given point. However, with the possible exception of the disagreement surrounding G. S. Rao's work (see Gopinathan Nair, 1979), it has been a friendly disagreement.

³¹ A long and extensive literature exists on the "present tense" medial and construction in Tamil (and Malayalam); see Andronov, 1961; Glasov, 1968; and Zvelebil, 1971. The present tense is not attested until very late in Old Tamil and then only sporadically (Subrahmanyam, 1971: pp. 240–241). It is clearly periphrastic in form, using past tense morphology, but it is not at all clear what the originally auxiliary verb was.

³² This is the so-called weak/strong system described in section 132.132 and 132.134. In the traditional description, weak verbs have *-t-*, *-nt-*, and *-i(n)* as pasts in different conjugations while strong verbs have *-tt-* and *-nt-*. With a better reorganization (see McAlpin, 1973: pp. 369–370 for a detailed discussion of this same system in Malayalam) on the basis of their phonological shape, some verbs have pasts in *-t-*, *-i(n)*, or *-nt-* (Graul class 7), while sonorant final verbs truly alternate affective/effective by switching between weak and strong past in *-nt-* and *-tt-* respectively; Ta *uṭaintatu* 'it broke (intrans.)', *uṭaittatu* 'it broke (trans.)'.

TABLE 1.8

Attested Medials after P. S. Subrahmanyam, 1971.

Medials	TaKod	Ka	Tulu	Te	Go	KoKui	KolPa	KxMt	Br	Kor
<u>Past</u>										
1. t	x	x	x	(x)		x	x	(x)		
2. nt	x	(x)			x?		x			
3. tt	x	x	x	x	x	x	x			
4. i	x	R	x	x		(R)	R			
5. cc	?			D	R	R	R	x	x	
6. kk								x	x	x
7. n	?			?			?			
<u>Nonpast</u>										
1. (p)p	x	x	x			R				
2. (k)k	x	x			x	R	x		?	
3. (t)t	?	R		x	x	?	x	x		
4. um	x	x	x	x			x			
5. n	R		R		x	x	(x)	x		x
6. o								x	x	
<u>Negative</u>										
1. ā	x	x	x	x		x	x		x	x
2. vā					x	x				
3. ø	x	x								

x = attested, (x) = attested but rare.

R = related form attested, D = derivative attested.

TABLE 1.9
The Proto-Dravidian Verbal Nonpast and Its Reflexes

	Old Tamil			Konda Nonpast	Kui Future	Gondi Future	Kolami Durative	Kurux Present (female)	PDr Nonpast
	A	B	C						
1s	enku		- <i>ø</i> -ku	-n-a	- <i>ø</i> -i	-k-ā	- <i>d</i> -un	- <i>ø</i> -en	-N-ku
1pex	en̄kum		- <i>ø</i> -kum	-n-ap	-n-amu	-k-ōm	—	- <i>ø</i> -em	-N-kum
1pin	en̄rum		- <i>ø</i> -tum	-n-aṭ	-n-asu	-k-āṭ	- <i>d</i> -um	- <i>d</i> -at	-N-t ^{um} _(at)
2s	en̄ri		- <i>ø</i> -ti	-n-i(d)	- <i>d</i> -i	-k-ī	-n-iv	- <i>d</i> -i	-N-ti
2p	en̄rir		- <i>ø</i> -tir	-n-ider	- <i>d</i> -eru	-k-īṭ	-n-ir	- <i>d</i> -ay	-N-tir
3sm		*en̄man	-m-an	-n-anru	-n-an	-ān-ūr	-n-en	—	-N-anrē
3sn		en̄num	-um- <i>ø</i>	-n-ad	-n-e	-āx	-un- <i>ø</i>	- <i>ø</i> -i	-N
3ph		en̄mar	-m-ar	-n-ar	-n-eru	-ān-īr	-n-er	-n-ay	-N-ar
3pn	en̄pa		- <i>ø</i> -pa	-n-e	-n-u	-ān-un	-n-ev	- <i>ø</i> -i	-N-pa

The forms in italics are innovations and are not cognate. Particularly note the correspondences between the forms in boldface.

others, such as Tamil with its finite verbs, have assimilated completely.

132.22 Personal endings. As a general rule, the personal endings of the typical Dravidian verb closely parallel the personal pronouns and appellatives of the language. Even at the protostage there is a close connection between these systems; see sections 131.3 and 131.4. However, it must be kept in mind that any change or innovation in the pronouns is usually reflected in the personal endings. It is easy to fall into circular arguments. The forms of the personal endings given here follow Subrahmanyam (1971: pp. 397–422) in details, and are typical of current personal endings. Examples of these can be seen in tables 1.9 and 1.10, while a different analysis is given in section 542.

132.221 First person endings. Subrahmanyam reconstructs PDr **-ēn* for the singular and **-ēm* for the exclusive plural. There are no major problems with these forms. However, the inclusive form is more elusive. First, most modern Dravidian languages have dropped the contrast in plural endings, even where it is maintained in the pronouns. Second, the attested forms come in two distinct groups. The southern languages attest **-ām*. Kurux-Malto has *-(V)t*, which may or may not be related to Gondi and Konda *-at*. Similarly Kui's *-as* may be related to this or to the *-ār* found in Parji. Thus, the form **ām* seems most likely, but with a possible alternative **-at/t*, as the Proto-Dravidian form. See also section 542.72.

132.222 Second person endings. The singular forms reconstruct **i/-āy* with no good explanation of the alternation. However, similar alternatives are found elsewhere, note section 131.33. The plural forms reconstruct PDr **-īr*. Gondi *-īṭ* is an innovation from the pronouns. Many second person forms depend on an *ī* (or *āy*) versus *ā* to distinguish second person from third person forms; OTa *ellīrum* 'all of you', *ellārum* 'all of these people'.

132.223 Third Person Endings. The third person endings closely follow the appellatives in form and structure; see section 131.41. The masculine singular is **-anrə* (after Krishnamurti, 1974), while the non-masculine singular is **-(V)tə*, which sometimes assimilates. The human plural is **-ār* and the neuter plural is probably **-av*. Neuter plurals tend to be replaced in use by the singular.

132.23 As presented in P. S. Subrahmanyam (1971: pp. 102–396), there is only a compendium of Dravidian medials which, as an analysis for Proto-Dravidian, is clearly unsatisfactory. For a cogent criticism of why it is wrong, see D. M. S. Bhat (1976) who, however, does not come up with a detailed counterproposal. At present (1979), there is no real under-

standing and consensus on the medials, and a thorough solution awaits detailed analyses of the major subgroups. Nevertheless, Dravidianists do speculate and discuss possible solutions. Bhat (1976: pp. 256–257) suggests that **-ind-* may be the underlying past marker, but gives no details. Krishnamurti (1978: pp. 18–19), without providing specifics, tentatively reconstructs:

*k, *nk, *p, *mp	(nonpast intransitive)
*kk, *nkk, *pp, *mpp	(nonpast transitive)
*t, *nt	(past intransitive)
*tt, *ntt	(past transitive)

Except for fairly obvious directions (pasts in dentals, nonpasts in velars [and labials?], and nasals playing an important, if unspecified, role) there is no consensus among Dravidianists on forms, format, structure. For example, is transitivity (affective/effective) directly connected with tense at the protostage or not? It is every Dravidianist for himself and a very exciting time in comparative Dravidian morphology. I am willing to speculate on the nature of Proto-Dravidian (see section 132.5) because the overall framework is crucial for the interpretation of the forms. Without it there can be only the catalogs of Subrahmanyam (1971) and Andronov (1970). Nevertheless, the arguments can be settled only in the details of the subgroups, which is the obvious next direction for comparative Dravidian morphology.

132.3 Other Verbal Forms

132.31 Nonfinite predicates. Typical of Dravidian languages is a set of nonfinite verbs (there is no common terminology; I prefer converb) which function as nonfinal predicates. Typical of Dravidian syntax (see section 141.2) is a series of connected statements A, B, C, (and) D, each with its own predicate. Of these only the absolutely final one is finite. The others are one of these nonfinite forms and depend on the finite verb for their TAM markers and personal endings. These statements often share the same subject, but not always. It is only necessary that in the speaker's opinion they form part of some unitary action. Paralleling the medials, there are three of these nonfinites: the converbial (also called the adverbial participle), infinitive, and negative converbial. The *converbial* is the past converbial (nonfinite) in the sense that action of its verb must precede (or in some languages such as Modern Tamil, also be simultaneous with) the action of the following predicate which may itself be nonfinite. Paralleling other changes in the morphology, many languages (cf. Telugu) have innovated a present converbial for

TABLE 1.10
The Proto-Dravidian Appellative Nonpast and Its Reflexes

	N. Tamil Appellative	-Future Verb	Telugu Future	Gondi *	Pengo Future	Parji Present	Kurux Future	PDr Nonpast
1s		-pp-ēṇ	-tā-nu	-nd-ūn	-n-an	-m-en	-o-n	-N-en
1pex		-pp-ōm	-tā-m	-nd-ūm	-n-ap	-m-om	-o-m	-N-em
1pin					-n-as		-o-t	-N-aṭ (?)
2s		-pp-āy	-tā-vu	-nd-ī	-n-ay	-m-ot	-o-y	-N-ay/i
2p		-pp-īr	-tā-ru	-nd-īṭ	-n-ader	-m-or	-o-r	-N-ir
3sm	-ppa-v-an	-pp-āṇ	-tā-du	-nd-ūr	-n-an	-m-ed	-o-s	-N-anrə
3sn	-ppa-tu	-kk-um	-tun-di	-nd-ū	-n-at	-m-o	-o	-N-(a)tə
3ph	-ppa-v-ar	-pp-ār	-tā-ru	-nd-īr	-n-ar	-m-er	-o-r	-N-ar
3pn	-ppa-vay	-kk-um	-tā-yi	-nd-ūṇ	-n-in	-m-ov	-o	-N-av

*Called the Past Irrealis cum Habitual. This is a mixed base (n-nonpast, d (<*t)-past) which has entered this morphological system.

Forms in italics are not cognate in this system.

simultaneity which then contrasts with the past converbial. The *infinitive* is the nonpast nonfinite in that the action of its verb must follow (or be simultaneous with) the action of the following predicate. It is commonly used to express purpose or intention, often with a modal verb. The *negative converbial* is the negative for both. There is no negative infinitive, except as a periphrastic construction. The negative converbial can introduce considerable ambiguity since it is unclear if its negation applies only to itself, to all the preceding predicates, or to some degree in between.

132.311 The converbial, for example, in South Dravidian typically consists of the past medial without any personal ending. This is in spite of the fact that it has no inherent tense of any sort. The rest of Dravidian, except Kurux and Brahui, where the Dravidian morphology has been lost, tends to use *-i* or *-ci* for the converbial. This ending *-ci* is usually analyzed as related to the past medials, i.e., **(i)ti > ci*. Old Tamil has *-icin(-)* as a sporadic form which is probably related. Thus, it has a good claim to Proto-Dravidian status, but the situation is not clear. Old Tamil has a grab bag of morphology available for this form: the regular *t*, *nt*, *tt*, *in* and "irregular" *u*, *aa*, *uu*, *(u)pu*, *ii* (*< *iyi < *ici?*); see L. V. Ramaswami Aiyar, 1938: pp. 759–760.

132.312 The infinitive clearly has its own ending as PDr **-a*. However, this vowel is commonly added to two of the set of nonpast markers, namely *(k)k* and *(p)p*. In Modern Tamil the infinitive ending is (weak) *-a/(strong)/kka*, in Old Tamil it was *-a/-ppa*. In Old Tamil *-kka* was rare and late as an infinitive and was usually associated with the hortative. This use or close association with the hortative is normal in South Dravidian. The infinitive has tended to go its own way somewhat more freely, and is commonly replaced wholly or in part by true verbal nouns.

132.313 The negative converbial in Proto-Dravidian is almost certainly **-ā*. In South Dravidian, it has tended to add a dental (*>-ātə*), but Old Tamil clearly attests *-ā*, and *-ā* is well preserved in the frozen negative conditional form, NTA *-āviṭṭāl* (*ā + viṭṭāl*). Similarly, Central Dravidian tends to add a *-k*.

132.32 Particles are verbal adjectives and are the source of most adjectives in modern Dravidian languages. As a group they tend to consist of the TAM medials followed by a specific participial ending in lieu of the personal endings. In reconstruction they also repeat the triad of forms: past, nonpast, negative. The past participle reconstructs as the past medial plus **-a* (**-i* as a variant?). The nonpast is different and reconstructs **-um* (*-uN*), which is the

same form as the neuter nonpast finite verb. It is widely attested, but has often been replaced. The negative participle clearly has **-ā* again.

132.33 A conditional form in *-in*, *-il*, and *-(k)k-il* added to the verb stem is attested in Old Tamil-Malayalam with a few reflexes elsewhere. It seems to be archaic. Except for this, a periphrastic construction on the converbial is the norm throughout Dravidian. Typical is the Modern Tamil conditional *-āl* (*< ākil < āk* 'become' + *il?*). No ending reconstructs for the protostage.

132.34 The imperatives form a separate system. The normal imperative singular is the verb stem with no ending. The most widely attested plural and clearly Proto-Dravidian is **um/*im*. In many languages second person finite verb morphology influences the imperative and the use of a nonpast as an imperative is widespread. In South Dravidian the infinitive (in *-(k)a/-kka*) functions as a hortative and velars are found in polite imperatives in Kurux-Malto and as augments in Brahui. Prohibitives generally work on the model of verb stem + negative marker + second person endings. While such a structure is probably Proto-Dravidian, analogy clearly plays too large a role to reconstruct reliably the form behind the negative in *-ā*.

132.35 Verbal nouns of many kinds certainly exist, but most are only special cases of appellatives or of other nominal derivation; cf. section 131.43. It is possible that the ending **-al* on the verb stem could be Proto-Dravidian in origin; see Andronov, 1979: p. 69.

132.4 The Proto-Dravidian Nonpast Paradigms

132.41 **The Old Tamil Archaic Nonpast.** The grammar of Old Tamil is not well formed. It was a bardic language of great style which obviously drew on a varied dialectal base. Moreover, it kept usages and forms which had already become quite archaic in the vernacular. Since Old Tamil is the oldest attested Dravidian language, its archaisms and complexities take on great importance for comparative Dravidian morphology. Unfortunately, Old Tamil morphology has two and a half forms for everything. Moreover, the poetry is terse and uses indirection with great skill. Since the commentarial tradition lags behind parts of it by up to a thousand years, much of Old Tamil is difficult to interpret. When we know what it means, we often do not know how it means that. Nevertheless, here there is the morphology found nowhere else in South Dravidian.

Within Old Tamil's stray morphology, i.e., forms which cannot be directly related to the later language, is a collection of nonpasts discussed as an addendum to the more normal forms in *-(k)ku*, *-(p)pa*,

-um. L. V. Ramaswami Aiyar (1938) discussed them separately as third person plurals in *-pa* (p. 763 [4]), first person forms in *-ku* and plural *-kum* (pp. 763–764[6]), third person, human plurals in *-mar* (p. 764 [7]), second person forms *-ti*, *ṭi*, *-tti*, and plural *-tir* (pp. 767–768 [vii]), and first person plural *-tum* (pp. 768–769). It is very interesting that, until rather recently (McAlpin, 1975a: pp. 106–107), no one ever seemed to have noticed that, except for the partial overlap of *-pa* and *-mar*, they are all in different persons and numbers. If the common neuter *-um* is added in, they form a complete paradigm; see table 1.9, columns A and B. Of these endings, the first and second person forms and the epicene plural *-pa* begin with consonants (often assimilated) and are added directly to the verb stem. The doubling of consonants typical of strong verbs does occur; *irakku* (1s) ‘I (will) entreat’, *olitti* (2s) ‘you hide’. These endings are given in column A of table 1.9. The remaining third person forms begin with a vowel or have no ending and have the morpheme *-(u)m* between the ending and stem. The masculine form **eṇmaṇ* is not attested in Old Tamil.³³ The common *eṇmaṇar* ‘they say’ is probably not directly related. The complete paradigm is given in column C. These forms have no medial when the personal ending begins with a consonant. They have *-m-* if followed by a vowel, and end in *-um* if final.

132.42 Reflexes of this paradigm are scattered widely through Dravidian. The single best attestation is the nonpast of morphologically conservative Konda, where the medial is *-n-*. This is followed by the normal personal endings for that language. Particularly note (table 1.9) the second person forms with *d*. Kui shows us the next stage commonly seen in Dravidian development. It is essentially the same system with minor shifts in the personal endings. Here, however, the *d* that we saw as a personal ending in Konda has been reinterpreted as a future tense marker. The *n/d* alternation is synchronically quite unmotivated in Kui. In the Kolami-Parji group, the Kolami durative shows a similar shift except that here it is the first person plural inclusive that has partially been re-analyzed as a tense marker and this has been generalized as far as first person singular. It is possible that the common dental future tense marker in Central

Dravidian has its origin in these miscut personal endings. Gondi shows an alternate scheme where the first person marker *-ka* has spread as far as second person, but the *-n-* is maintained in third person. The female forms of the Kurux present show an archaic variant formally very close to Old Tamil; first person *k*’s have been lost as has the *-n-* of the third person neuter. Otherwise Kurux has the dentals (again reinterpreted as a tense marker) where Old Tamil has dental endings and the nasal in the third person human plural *-n-ay*, again like Old Tamil. This leads us to the reconstruction of a Proto-Dravidian nonpast paradigm as shown in the last column. This is highly significant in that it can be reconstructed to the proto-level as a paradigm. Note particularly how Old Tamil, Konda, and Kurux agree on details. The first person inclusive and both second person forms all attest dentals not found in the rest of the paradigm. Note also the general lack of nasal endings in the first person singular, except where obviously extended by analogy from the plural (i.e., in Kolami and Kurux). It is highly significant that this paradigm is not an appellative one, although details of specific languages have come from that system. These and other innovations are shown in italics in the table.

132.43 However, the paradigms given in table 1.9 are not the only nonpasts in Dravidian, often not even in the languages cited, nor is the reconstructed paradigm the only nonpast in Proto-Dravidian. It could, and presumably did, use the appellative endings on verbal stems. At any rate, this model is attested widely throughout Dravidian and is, in fact, the dominant verbal morphology functioning today. Examples of this morphology are given in table 1.10. Two systems are given for Modern Literary Tamil. Column A gives the participial nouns (appellatives on a participle base). These are completely regular on a base *-ppa* (which is, in fact, not the participle; that is in *-(kk)um*). The so-called future verb uses *-pp-* (weak *-v-*) as the medial for human subject verbs, but uses *-(kk)-um* for neuters. It is fairly obvious that the human futures are appellative in origin. The major shift is *ava > ō > ā* in the personal endings. Similar examples are given from other Dravidian languages. The markers of an appellative (or appellative-derived) system are as follows: (1) the consistent use of the same medial throughout, (2) this medial related directly to participial or other verbals in its structure, and (3) the personal endings essentially the same as those used in the appellative system, which usually implies a close connection to the pronouns in morphology. Looking at table 1.10, most of these features are evident. Barring minor phonologically conditioned vari-

³³ This lack of attestation of the singular form **eṇmaṇ* is probably due to the formulaic nature in which the plural is used. These forms are used in appeals to authority; *eṇmaṇar pulavar* ‘learned poets say’, *eṇpa* ‘they (the experts) say’, etc. Since these forms are always honorific (formally plural), there is no occasion for a singular citation.

ants (Telugu *tun* ~ *tā*) they consistently use the same medial, and these can be related to participles. Note how the participial ending seen on Tamil *-um* appears as the appellative base in Pengo *-n-*, Parji *-m-*, and possibly Kurux *-o-* (< **um*?). In the personal endings, first person plural forms generally fall together. They never show any particular similarity to the second person forms. The first person singular forms regularly end in an *n* following the pronouns (PDr **yaŋ* > *eŋ*, etc.). Second person forms commonly have *-i* or *-y* in the singular and *-r-* in the plural on the pattern of the pronouns *nī*, *nīr*. Telugu *-vu* has the same origin, but indirectly. This comes from a miscutting of the pronoun *nīvu*. The third person neuter forms commonly have a dental (*-tə*) ending which is clearly related to the appellative and pronominal ending *-tə*; cf. Ta *atu*, Te *adi*, Go *ad* 'it, that thing'. This is not to say that verbal and appellative systems do not influence one another. In table 1.9 Konda-*ap* is an innovation, while *-ad* is definitely and *-e* is probably appellative. Kolami and Kurux both have first person singular forms at least influenced by, if not actually, appellatives. In table 1.10 Tamil *-(kk)-um* is clearly non-appellative as is the second person plural ending *-ader* in Pengo. For some languages, such as Gondi, the endings become very similar and often identical. It is the appellative system which has been, on the whole, the productive one and which has tended to become dominant. The appellative system reconstructed for Proto-Dravidian is much more dubious in form than that for the nonpast because the appellatives have been continually productive as a model and system. Thus, they are much harder to reconstruct in detail.

132.5 Dravidian verbal morphology is complexly intertwined to such a degree that we may never understand it entirely. The involvement of periphrastic systems is particularly difficult to ascertain. However, certain general statements can be made pending a more definite solution.³⁴ It should be kept in mind that this is one Dravidianist's understanding at one point in time.

The primary past system marker is *-t-*. The converbial seems to work with the same morpheme, but commonly with an *-i*, i.e., **-(i)ti*. This was commonly

palatalized to **-(i)ci* and this, in turn, influenced pasts in *-i-*. The causative marker in *-tt-* often became entangled with the past with many complex resolutions; see section 132.134. The converbial in **-ci* gave rise to the verb forms in Kurux-Malto through the collapse of periphrastic construction; the *k-* past remains an enigma. It is not clear what system of personal endings was used in the Proto-Dravidian past. The participle ended in **-a* after the past medial. The negative system was similar in many ways, but clearly used **-ā* as its medial and probably had no separate converbial or rational ending.

The "nonpast" seems to have been primarily built around a morpheme in **-əN* (*-un/m*). This seems to have primarily been a durative aspect marker. Used directly it gave rise to the nonpasts both as a verb (table 1.9) and as a participle and appellative base (table 1.10). It combined with the past marker *-t* to give the durative pasts (so attested in Gondi, misanalyzed in Subrahmanyam, 1971: p. 269) directly and to the weak pasts of South Dravidian indirectly; see footnote 29, section 132.134. The *-kk-* of the nonpasts is possibly a transitivity marker or a hortative or some combination of the two that became associated with the nonpast and infinitive morphology. Similarly, the South Dravidian future can be traced to subjunctive/desiderative verbal (so in Konda-Kui) which was used as an appellative base to yield the modern forms. The Central Dravidian futures in *-t-* possibly come from a miscutting of old personal endings, but the details are unclear. The infinitive ended in **-a*. The imperative used the stem for the singular and an ending **-um* for the plural.

The appellative systems consisted of the appellative endings which were continuously being updated, due to influence from the pronouns and other appellatives on a variety of participles and verbals. Only the forms on *-əN* can be even attempted for Proto-Dravidian at the moment, but in principle, any verbal could be so used. Periphrastic structures were surely important, but any details will take much detailed reconstruction.

The purpose of this admittedly rather speculative statement is twofold. One is to make it clear that Dravidian morphology does not have a simple, straightforward basis. It is multibranched and convoluted. Nevertheless, it does have some sort of very real system (however, possibly an areal rather than genetic artifact). We can talk meaningfully of past systems while having only a vague idea of what the past marker really was. In addition, all Dravidianists have assumptions and biases. Many items in Dravidian surface

³⁴ It should be stressed here that except for small closed systems like the personal pronouns and numerals, there is almost no morphology which can reliably and specifically be handled as Proto-Dravidian. All such discussions of Proto-Dravidian morphology are only about hypotheses of Proto-Dravidian structure. The next major thrust in comparative Dravidian must be a carefully detailed step by step reconstruction through the various stages, both morpheme by morpheme and as a system.

morphology are hopelessly ambiguous. Any analysis works on assumptions (is Tamil-Kodagu verb morphology a good model for Proto-Dravidian or not?). I feel it is better to be direct and aboveboard with these assumptions and speculations instead of tacitly working them into the analysis, unstated.

1.4 DRAVIDIAN SYNTAX

140. It is difficult to speak meaningfully of a syntax which can be labeled Proto-Dravidian. Most Dravidian languages have almost identical syntactic structures, but the problem is that so do Indo-Aryan Marathi and Singala; note the articles in Southworth and Apte, 1974. In other words, there is a syntactic pattern typical of Dravidian languages, but it is very difficult to determine how much of it is inherited and how much is areally influenced. Presumably, large portions of this common pattern are derived from Proto-Dravidian, but it is very difficult to specify which details and impossible to describe the overall pattern. The only Dravidian languages to vary significantly from this pattern (such as Kurux) do so under obvious Indo-Aryan (usually Hindi) influence and tell us little that is insightful. There is a typically Dravidian syntax which is not necessarily synonymous with the syntax of Proto-Dravidian.

The following discussion uses Tamil as the example, primarily because it is the best studied and also the most familiar to the writer. It is intended to serve as an example of the areal norm, but details, such as the quotative and the use of the appellative (which are almost certainly reflexes of Proto-Dravidian) have been given prominence. It is often difficult to find any information on syntactic usage in many Dravidian languages. See Annamalai, 1969; Schiffman, 1969b; Vesper, 1971; and Lindholm, 1978 for extended treatments of syntax in specific languages.

141 Typical Examples from Tamil Syntax

141.1 In the well-formed Tamil sentence, the basic order, ignoring shifts for style and emphases, is always Subject-Object-Verb. As a rule, modifiers always precede the modified. Hence adjectives, genitives, and clauses always go before nouns, adverbs before verbs, etc. Cases and postpositions follow nouns, and in turn, are followed by clitics. Thus the noun phrase is usually Clause/Genitive + Numeral + Adjective + Noun (Case) + Postposition + Clitic.

(1) *avaṇṭaiya mūṇru pustakattukku-mēlē-yā?*

On top₅ of his₁ three₂ new₃ books₄?₆

Equational sentences usually do not have a verb attested, although there is clearly one in the deeper grammar.

(2) *atu pustakam.*

That₁ [is a] book₂.

141.2 The complex sentence normally has several predicates, only the last of which is formally finite. All the rest are nonfinites (converbs) and usually converbials (or infinitives). The finite verb is often an auxiliary rather than a lexical verb. By a factor of three, the converbial is the most common verb form in Tamil. This is the only way to conjoin predicates, since conjunctive clitics cannot be used with them.

(3) *avaṇṭukku pōy ōṭa vēṇṭum.*

He wants (lit. to him₁ is wanted₄) to go and run. (go -*cvb*.₂ run *inf*.₃).

When a sentence is embedded in another which modifies a noun, i.e., as a participial clause, the linking noun and all its case markings, postpositions, and clitics are lost in the clause. Not only are there no relative pronouns in Tamil, but there is commonly not even an analogue.

(4) *yāṇai puliyai koṇṇratu.*

An elephant₁ killed₃ the tiger-*acc*.₂.

(5) *puli oruvaṇai koṇṇratu.*

The tiger₁ killed₃ a man-*acc*.₂.

(6) *yāṇai oruvaṇai koṇṇra puliyai koṇṇratu.*

The elephant₁ killed₅ the tiger-*acc*.₄ [which] killed₃ a man-*acc*.₂.

In very complex sentences another structure is possible. It uses the full finite verb plus the clitic *-ē* (<origin?) followed immediately by a deictic, which is equivalent to a relative pronoun.

(7) *puli oruvaṇai koṇṇratē anta puliyai yāṇai koṇṇratu.*

The elephant₆ killed₇ the tiger-*acc*.₅ which killed₃ a man-*acc*.₂. (Lit. A tiger₁ a man-*acc*. killed *-ē* that tiger-*acc*. the elephant killed.)

This sentence, which is improbable since it is so simple, depends very much on the sequence of *-ē a-* (the deictic) to function properly.

141.3 Typically Dravidian is the use of a quotative verb for all quotations and similar embeddings, as well as metalanguage constructions. In Tamil this verb is *eṇ-* (PDr **eṇ*). This verb (and no synonym) must be used. Tamil cannot confuse language and

metalanguage because all naming, referencing, and labeling must use *eṇ* (at least in the deep grammar).

(8) *avaṇ pēr jāṇ*.

His₁ name₂ [is] John₃.

is more properly

(9) *avaṇ pēr jāṇ eṇkirātu*.

His₁ name₂ [is] (that which is called)₄ John₃.

The quotative often ends up involved in conditionals and conjunctions by derivation.

eṇṇāl, *eṇkil* 'if (it is said)'

eṇṇāl 'however' (<'if it is said')

For very long quotations a word (*āvatu*) is inserted to mark its beginning. Of course, *eṇ* marks its end.

141.4 There is one major exception to the rule that modifiers always precede the modified and this involves the appellatives. Appellatives in apposition follow their head nouns. Moreover, it is common for postpositions to be used only once for a series of appositives. This appellative construction often parallels a more normal modifier construction with which it contrasts in subtle ways. The appositive appellative is a full noun and must agree in person and number with its referent, while preceding modifiers are always invariant.

- | | | |
|------|--------------------|----------------------|
| (10) | <i>oru hōtalil</i> | <i>oru ālukku</i> |
| | <i>hōtal oṇṇil</i> | <i>āl oruvaṇukku</i> |
| | in one hotel | to a person (male) |

The appositive series is used to avoid long series of conjunctive clitics *-um* (see section 130.32) by using the noun for 'all', *ellām* (n.) *lellōrum* (human) as a dummy final element which takes the cases and postposition.

(11) A-um B-um C-um = A,B,C, *ellām*

A, B, and C

This appositive construction is most common with numerals, including the general ones 'all', 'ten', 'some', etc., but it can be used for any adjective. Note that, strictly speaking, adjectives occur only before nouns and take no endings of any sort (even clitics). Other related usages, such as appositives and predicates, require the appellative.

(12) *nalla pustakam*.

'good book'

(13) *pustakam nallatu*.

'The book is good'.

II. ELAMITE

2.1 ELAM

211 The Land

211.0 Historically Elam is known to have occupied the central and southern Zagros mountains of modern Iran along with the adjacent plains of Khuzistan and the Persian Gulf coast. Recently available evidence (cf. Lamberg-Karlovsky, 1978: pp. 114–120) indicates that in late prehistory (*ca.* 3000 B.C.), Elam, or its strong influence, extended farther to the east and north, including large portions of the Iranian plateau. The pattern of Elamite history is a complex interaction of the plains of Khuzistan, which face Mesopotamia, with the Zagros highlands, and both of them with the hinterlands of interior Iran and Baluchistan. Geography is important in understanding Elam. It is worth examining in some detail; see the *Cambridge History of Iran* 1 (Fisher, 1968).

211.1 **Khuzistan.** Khuzistan (*Khūzistān*) is the Persian name for the area that was the lowlands of Elam; see Adams, 1962 for a detailed prehistory and history of this area. It is highly probable that the name is derived from *^hŪ(v)ja*, the Old Persian name for Elam through Middle Persian *Huž* (cf. Kent, 1953: p. 175). Physically, the area is an extension of the plains of Mesopotamia from which it is separated only by extensive marshes along the lower Tigris River. However, there are some very significant differences due to its submontane location. The region, which was known as Susiana in classical times, has its own sources of water from the Zagros mountains. Susiana is watered by two river systems, the Karkheh (Per *Karkheh*, Akk *Uqnu*, Gk *Choaspes*) and the Karun (Per *Kārūn*, Gk *Pasitigris*) with its major tributary, the Diz (Per *Diz*, Akk *Idide*, Gk *Koprates*). The Karkheh is lost in the marshes bordering the Tigris while the Karun today joins the *Shatt-al-'Arab* near its mouth.

As Mesopotamia proper depended on the Tigris and Euphrates, Susiana depended on the Karkheh and Karun. As is common in Iran, the transition from the mountains to the plains is abrupt. The alluvial plain where the rivers leave the mountains was long the heart of Susiana. Here the soil was good, the water supply adequate, and the gravelly nature of the soil allowed adequate drainage. Furthermore, this land was close to the three hundred millimeter isohyet of rainfall and most of Susiana was within the two hundred millimeter isohyet, which is the absolute limit of rain-fed agriculture under Mesopotamian

conditions (Adams, 1962: p. 110). Thus, Susiana provided a zone of early transition from dry to irrigation farming, particularly since in some areas irrigation systems could be established simply.

The location of the city of Susa (*El Šušun*) was important in this view. Susa was located close to where the Diz first approaches the Karkheh and in fact lay on a channel, the Shaur River (Akk *Ulai*, Gr *Eulaios*), which connected them. Besides the boon of a doubly based, easily diverted water source, the gravelly undersoil kept salinization from being a problem. Thus, over the millennia Susa was usually the largest and most consistently occupied site in Susiana.

During the Elamite period, cultivation seems to have been restricted to those areas where rainfall and simple irrigation made it possible. Later, in Sassanian times, elaborate irrigation systems were developed extending cultivation far out onto the plain. For some centuries Susiana was the breadbasket of Iran. However, after the Islamic conquest, a decline in administration (and the effects of long term salinization) began a rapid decline in production that culminated with the disruption of central control. This period was characterized by slave revolts, by encroaching nomads, and by the Mongol invasions. Susa was a thriving city as late as A.D. 1170. Shortly afterward it was abandoned temporarily and was finally destroyed by Tammerlane in the fourteenth century. The irrigation system was abandoned and Khuzistan became largely deserted.

Khuzistan has one of the least desirable summer climates in the world. Strabo (XV.3.10) reported that snakes would be roasted alive if they crawled into the midday sun in Susa. Actual recordings of 72°C (161°F) in the sun and 50°C (112°F) in the shade have been reported (Hinz, 1972: p. 17). The coastal plain is an area similar to Khuzistan. It suffers from erratic water supplies and permanent settlements seem to have been primarily for trade. The site of Liyan, near modern Bushire, is the most important.

211.2 *Zagros*. The central and southern portion of the Zagros is one of the most complex mountain systems in the world. While the mountains consist of ridges roughly parallel to the coast, the drainage system has little to do with the current topography. Due to the mountains' rising in periods of little rainfall, streams cut their beds as fast or faster than the mountain rose, but there was little erosion of canyon sides. As a result, deep gorges called *tangs* run without reference to present topographic patterns, often through the highest crests of the mountains; see Oberlander, 1968. The tangs create an incredibly

tangled terrain and provide both crossroads and formidable barriers to travel. There are easily traversable roads which may be immediately adjacent to almost completely inaccessible areas. The central and southern Zagros tend to intricate series of mountain valleys with relatively more rather than fewer routes available. However, many valleys are quite isolated.

Cultivation is restricted to valleys that are not too high, have good alluvial soil, a reliable water supply, and good drainage. Salinization is a constant threat in many parts of Iran. Such areas for cultivation are often restricted to small pockets. A few of the valleys, such as the ones around Shiraz and Isfahan are extensive, well watered, and well drained and these have been the recurrent locations for cities. The ancient sites of Malyan and Persepolis are in the vicinity of Shiraz.

211.3 The limitations enforced on cultivation by the terrain appear continually in both Susiana and the Zagros (as well as the rest of Iran). Areas that are well suited to cultivation tend to be small and isolated. Even major urban areas such as Susa and Anshan (Malyan, the *Dasht-i-Baydā*; see Hansman, 1972 and Reiner, 1974 for identification) are, on a normal scale, quite small. Adams (1962: p. 115) estimates the population of Susa in antiquity to have been no greater than forty thousand. Elam never managed to attain, for any extended period, the population density of Mesopotamia or its centralization. Isolated valleys which can be defended at narrow tangs make a central authority difficult to enforce. However, the terrain encourages another pattern. The deathly hot plains of Susiana in summer make excellent pastures in the winter. The snowbound valleys in the winter make excellent pastures in the summer. A transhumant pattern in both cultivation and animal husbandry is one that fits this situation well and is a pattern that the people of Iran have always returned to when urban civilization has faltered. Thus, the terrain provides the foundation for two of the most typical characteristics of Elamite civilization — its federated nature and its resiliency over millennia. Susa could fall, but Elamite life would continue elsewhere and in due course reappear in the historical record.

211.4 The hinterlands of Elam included most of the interior of Iran. Iran can best be viewed as a triangular bowl with the Zagros forming the southwestern side. The Elburz Mountains are on the north, and the highlands of Khurasan form the eastern edge. The center of the bowl is made up of salt sinks that are among the most desolate in the world; see Fisher, 1968 for a detailed description. Cultivation is re-

stricted to well-watered areas with drainage, but rainfall is adequate for extensive grazing. The overall pattern is one of local specificity. The accidental details of a given valley can make all the difference in how it can be used. The result is that many things can be done in only a limited number of ways. Cities return to the same general area. Caravans and trade routes take the same predictable patterns century after century.

212 Prehistory and Archaeology

212.0 The prehistory of southern Iran is currently undergoing considerable expansion and reinterpretation. The following summary is, of necessity, very provisional. The major interpretive sources concentrating on Elam are LeBreton, 1957; Adams, 1962; Mallowan, 1969; Lamberg-Karlovsky, 1978; and the sources that they cite. The articles in *Scientific American*—Braidwood, 1960; Adams, 1960; Lamberg-Karlovsky, 1971; and Schmandt-Bessarat, 1978—are an easy introduction for the nonarchaeologist.

212.1 **Agricultural revolution.** One of the great cultural achievements of man, the development of agriculture, took place in the mountain foothills surrounding the Near East, the so-called Fertile Crescent; see Braidwood, 1960. Elam, both Susiana and the Zagros region, forms the southeastern end of the Fertile Crescent and took part in this accomplishment. After several millennia of steady development, by 5500 B.C., this revolution in food production had become an accomplished fact in the area. The result was the neolithic farming village on the West Asian model, cultivating primarily wheat and barley with some lentils and raising sheep and goats along with cattle. This wheat-barley-sheep-goat-cattle complex spread and became the dominant agricultural pattern in large parts of the Old World.¹ Other components of the mature stages of this culture are mud brick construction, pottery, grindstones, sickles, and other grain handling apparatus. Clay figures of the "mother goddess" type are typical. Following a common pattern, stoneworking (including grindstones and vessels), basketry and the apparatus for gathering and processing plant produce preceded this stage. Metalworking, the plow, and the wheel soon followed. See Redman, 1978, especially pp. 89–213 for discussion of this complex topic.

¹ There are, of course, other centers of domestication with other domesticants. The major contrastive one for this work is the Southeast Asia/South China area, which concentrated on a rice-water buffalo-pig-chicken complex.

212.2 **Urban revolution.** The increase in productivity and the resulting increase in population density set the stage for the next revolution, the origin of the city. The definitive beginning of urban status seems to be the presence of full-time local specialists who are not engaged in food production; see Childe, 1950. For approximately 1,500 years after the mature farming village was attained (*ca.* 5500 B.C.) there seems to have been little overt development, but the village complex was moving more and more onto the plain. Susiana may have played a crucial role in this since it is an area where the transition from rain-fed to irrigated agriculture is easily done by stages; see Adams, 1962: p. 110. Irrigation was definitely in use in the area by the end of the period.

By 4000 B.C. the Mesopotamian plain (including Susiana) was at the beginning of true urbanization, which took place in the following millennium. The outline is unclear, but the central authority necessary for large-scale irrigation (particularly in Sumer) led to urban development. Irrigation agriculture both required and produced the necessary surpluses for the controlling specialists; see Adams, 1960. See also Redman, 1978: pp. 215ff. for a discussion of this topic.

This took place by stages beginning with the Sumerian Ubaid stage (Ubaid 4 = Susa A). The pace sped up considerably during the Uruk phase (Early Uruk = Susa B) and culminated in the Jemdet Nasr phase (Late Uruk + Jemdet Nasr = Susa C) with the beginnings of writing, which fully established the urban revolution. The literate Early Dynastic period (=Susa D) followed; see Redman, 1978: p. 246 for periodization and chart.

212.3 **Writing.** The origin of writing in the ancient Near East has been a confusing problem for many years. Recently, Denise Schmandt-Bessarat (1977, 1978, 1979a, 1979b) has provided a hypothesis which pulls seemingly contradictory data together and makes a coherent case. Briefly summarized, there was an ancient (*ca.* 8000 B.C. on) practice of using various shapes of clay tokens as a counting and inventorying device. With the expansion of the economy and of long-distance trade in the Uruk-Jemdet Nasr period, this system was elaborated to keep up with new demands. New tokens were created and filing (stringing) and contractual (bullae) variants evolved. The bullae, clay envelopes covering the tokens, were secured by using the seals of the participants over their outer surfaces. They could be used as contracts or as bills of lading. However, as a contract a bulla had the great disadvantage in that it had to be destroyed to be read. This was solved by at first impressing and then drawing the tokens,

which were inside, on the outside of the bulla. It was quickly realized that only the drawings on the clay, along with the seals, were required (once dry, a clay document cannot be altered without the tampering being obvious). The drawings on clay became rapidly elaborated and writing was under way. The tokens were resimplified and went back to counting and inventory control, eventually evolving into the abacus. This hypothesis is simpler than the true situation undoubtedly was, but it does make sense of the data.

The elaborated token system was common to all of the area (as would be appropriate for a trading system), and in fact, the most important site for them is Susa (level Ca). However, when writing began around 3000 B.C., there were two different scripts, Proto-Sumerian in Sumer and Proto-Elamite in Elam. The Proto-Sumerian (pictographic) script fairly rapidly evolved into the classic cuneiform shapes of Mesopotamian scripts. Proto-Elamite remained very conservative and maintained its linear nature until it was replaced around 2250 B.C. There are also the early Proto-Elamite tablets from Tepe Yahya Level IVC (3400–3000 B.C. [?]), which remain to be explained; see Lamberg-Karlovsky, 1973: pp. 32–33.

These data can be explained by assuming that the token system was common to the area and its hinterlands. It is possible that the transferal to clay for local records took place independently and fairly early (cf. the Tepe Yahya tablets). Only under the increased economic demands around 3000 B.C. were the tokens abandoned as clumsy, and writing adopted as the norm. This rapidly became (or inherently was) language oriented and restricted. Hence, writing evolved independently (in detail if not concept) and essentially simultaneously in Sumer and Elam out of a long common tradition (the tokens). If writing had been introduced to Elam by Sumerian scribes (Mallowan, 1969: p. 258), the scripts would have been more similar than, in fact, they were. As was usual, Sumerian script evolved faster and further than Proto-Elamite. This led to the eventual replacement of Proto-Elamite by a Sumero-Akkadian cuneiform in the centuries after 2500 B.C. Proto-Elamite had become too unwieldy and too restricted. See Brice, 1962 for an excellent discussion of the Proto-Elamite script.

Proto-Elamite, however, had a derivative script evolve before it went out of use. There is an obvious similarity in form and style between the Proto-Elamite and the script of the Indus Valley civilization. Given the known contacts between Elam and Harappa (Lamberg-Karlovsky, 1972a), it is highly probable

that the Harappan script had its origins in Proto-Elamite. They appear so much alike that Fairervis (1976: pp. 45–46) has attempted a “transcription” from Proto-Elamite into the Harappan script.

212.4 Trade and contacts. In the period around 3000 B.C., there was a sudden expansion of the Proto-Elamite culture of Susa into the Zagros and large portions of Iran; see Lamberg-Karlovsky, 1978: p. 116. Sites included in this expansion are Godin (Weiss and Young, 1975) in the central Zagros, Sialk to the north of the Zagros, Malyan in the extreme southern Zagros, Tepe Yahya north of Bandar Abbas, and Shahr-i-Sokhta in Seistan. This seems to have been part of a trade network controlled by the Proto-Elamite state centered upon Susiana; see Weiss and Young, 1975 and Lamberg-Karlovsky, 1978. This trade network (Central Place Trade, see Lamberg-Karlovsky, 1972a) was part of the trade pattern between the Indus Valley and Mesopotamia. At the time it seems to have been largely in Elamite hands. Elam continued to play an active, if varying, role in the overland trade eastward for many centuries. Sea contact between Mesopotamia and the Indus Valley may have been an attempt to bypass the Elamite stranglehold on overland trade; see Lamberg-Karlovsky, 1972a: p. 228. Many of these Proto-Elamite sites were abandoned (cf. Tepe Yahya) about the beginning of the historic period. That corresponds to about the time of the fall of the last Proto-Elamite state, possibly as a result of disruptions in this trade pattern.

2.2 HISTORY OF ELAM

221 The Early Period (ca. 2500–1500 B.C.)

221.1 Awan. Although there are scattered references to Elam in Sumerian sources during the Early Dynastic period (see Hansman, 1972: p. 101), Elam first entered recorded history with an invasion by Sargon of Agade (2334–2279 B.C.).² At the time, Elam was being ruled from Awan (probably Anshan) under a dynasty which had been founded some centuries previously by Peli. Rimush, Sargon's son, continued the campaigns against Elam. His successor, Naram-Sin, made an agreement with Hita, the ninth king of Awan. This was the so-called “Treaty of Narām-

² For Elamite history I have followed the chronology in Hansman, 1972 after Hinz, 1972. The transcription of Elamite names follows the system in König, 1965. There is considerable variation in the sources. Major sources on Elamite history are Cameron, 1936; Hinz, 1972; and the articles in the *Cambridge Ancient History* (3rd ed.), i.e., Hinz, 1971, 1973; Labat, 1975a,b. Good summaries are available in Hansman, 1972 and Adams, 1962.

Sin," which is the only extensive document in Old Elamite. One of the few well understood lines says, "Narām-Sin's enemy is my enemy, Narām-Sin's friend is my friend" (Hinz, 1971: p. 651).

Hita's successor, Puzur-Inšušinak (Kutil-Inšušinak) was the last of the twelve kings of Awan. However, his reign saw a brief reestablishment of the Kingdom of Awan. With the campaigns against the Kimash rebellion and the Gutians showing the weakness of the Agade, Puzur-Inšušinak declared his independence. Part of his inscriptions were done in the Proto-Elamite script, its last recorded use. He fell, together with the Peli dynasty and the Kingdom of Awan around 2200 B.C., probably as an immediate result of an invasion by Gudea of Lagash (see Hansman, 1972: p. 101). However, this was the period of the Gutian invasions of Mesopotamia and is a confused period in history. This same period saw the abandonment of Proto-Elamite script and the adoption of Akkadian for inscriptions and other public use. During this period Tepe Yahya was abandoned (end of Period IV). It seems to have been a period of contraction and retrenchment for Elam and definitely marks a major break in the cultural tradition.

221.2 Simaš. Simaš lay in the mountains north of Susa and was formerly a vassal state of Awan. It became the center of a new Elamite kingdom and the beginning of a new dynasty. For most of its shadowy history, it was the Elamite center by default, since both Susa and Anshan had long Mesopotamian occupations.

Shulgi, a Sumerian ruler of the Third Dynasty of Ur, conquered Susiana by 2078 B.C. and had gained some sort of control over Anshan. He also created a sort of "foreign legion" of Elamite troops within the Sumerian forces. About 2022 B.C., the king of Simaš, Lurak-luhhan (?), made a lightning attack and conquered Anshan (Awan) and Susa from Ibbi-Sin, Shulgi's grandson. Ibbi-Sin, in turn, made a carefully prepared counterattack, recaptured the lost cities, captured Lurak-luhhan and dragged him back to Ur in triumph. Five years later Ibbi-Sin, who was having problems elsewhere, made his last attempt to resubjugate Elam.

The culmination of the problems came in 2006 B.C., when Simaš (headed by Hutrantepi?) invaded Sumer. Probably aided by the Elamite foreign legion, it conquered Ur, ended the Third Dynasty, and took both Ibbi-Sin and the temple deities back to Anshan. However, within a few decades, the situation was much as before. The end of the dynasty of Simaš was a quiet one. By a century later (ca. 1890 B.C.) there was a new permanent dynasty in Elam. This was con-

temporaneous with Hammurabi of Babylon's establishment of his rule in Mesopotamia.

221.3 The Sukkal-mah of Susa. The succeeding dynasty was founded by Ebarti, but became established only during the reigns of his children, Šilhaha and Šilhaha's sister the *amma haštuk* 'the (?) mother'. Inheritance was matrilineal and the structure of the state was federal. Elam was under strong Mesopotamian influence and was not completely independent. There is only one dubious inscription in Elamite and all other inscriptions are in Akkadian. The supreme title was Sumerian *sukkal-mah* 'grand regent', followed by the *sukkal* 'regent' of Elam and Simaš, and this in turn was followed by the *sukkal* of Susa. Succession was by office. The *Sukkal-mah* was succeeded by the *sukkal* of Elam and Simaš who was succeeded by the *sukkal* of Susa. A great deal has been written about the complexities of this succession (Hinz, 1972: pp. 87–91; though I must say that it looks to me like a perfectly normal succession of males in a matrilineal line³).

In the continuing seesaw for domination between Mesopotamia and Elam, Kutir-Nahhunte I, around 1711 B.C., launched an attack against Babylon, took it, and brought back the goddess *Nanaja* to Susa where she remained for a thousand years. However, the normal pattern was of clear Mesopotamian dominance. Babylon fell to the Kassites around 1593 B.C. Elam continued to be mentioned for a time, but its status is unclear. After 1520 B.C. there is no word about Elam for about two hundred years.

222 Classical Elamite Empire (ca. 1300–1100 B.C.)

222.0 When Elam reappeared on the historical scene around 1300 B.C., it was the dominant force in the area. For a relatively brief, but sustained period, there was an Elamite empire. It was a period of reemergent Elamite nationalism, and Elamite replaced Akkadian as the usual language for inscriptions (except for maledictions). Old Elamite titles were reestablished and temples were reconstructed. This was the period of Middle Elamite.

222.1 The Igihalkids. The founder of this dynasty,

³ The history of Kerala in South India has many examples of matrilineal succession of this type, including the holding of position by inheritance rank. When this system worked well (viz. the Zamorins of Calicut), it produced a leader who had held all of the major subposts and who was superbly trained. When it did not (as in Cochin), it could be pure chaos. It led to dynastic stability, since succession depended only on survival. In the meantime there were meaningful, powerful roles for junior members of the family. With rapid promotions due to frequent deaths coupled with close age grading, it could be a satisfactory system.

Igihalki, was possibly a Hurrian (Labat, 1975a: p. 381). After the reign of several kings, probably originating in the east of Elam (Hansman, 1972: p. 105), the Igihalkids appeared with Humbannumena (1300–1275 B.C.). His successor, Untaš-GAL (Untaš-Nappirriša), built the ziggurat at the temple city of Choga Zambil (Dur-Untaš), near Susa on the Diz, but with water brought by canal from the Karkheh. His reign was a golden one for Elam and is noted for the development of the arts. He was succeeded by his nephews, Unpahaš-GAL and Kitin-Hutran, in rapid succession. After an active military career, Kitin-Hutran was defeated when the Assyrian king, Adad-Shum-Nasir, captured Elam and ended the dynasty around 1210.

222.2 The Shutrukids. After a brief period of confusion, a new dynasty of five kings appeared and transformed Elam into a major military power for fifty years following. The Shutrukids derive their name from Šutruk-Nahhunte, who centralized Elam at Susa by controlling seminomads, in addition to incorporating the kingdom's most remote districts. Šutruk-Nahhunte's foreign invasions spread Elam's influence across the Mesopotamian plain as far as Babylon. From the capital city of their ancient foes, the Elamites took Hammurabi's obelisk with its engraved laws as plunder. Šutruk-Nahhunte named one of his sons "Regent of Babylon" (Labat, 1975b: p. 485). He also worked to make Susa the center of his kingdom both religiously and politically. By gathering monuments, stelae, and documents from all over Elam and storing them in Susa, Šutruk-Nahhunte helped foster Elamite nationalism. His son Kutir-Nahhunte followed as king. He ruled a strong state which included the coastal plain in the south and the Mesopotamian plain in the west. Kutir-Nahhunte died in 1140 B.C. after gracing Inšušnak's temple with his own statue (Labat, 1975b: p. 487).

A prosperous era aptly regarded as *pax Elamitica* marked the reign of Šilhak-Inšušnak, successor to Kutir-Nahhunte. Recent military successes had made Elam wealthy enough to begin an extensive building program. Šilhak, who married his brother's widow, valued his sense of history. He listed his predecessors' names on the sanctuary walls of the many temples which his government had restored. The temples to Inšušnak were spread throughout Susiana, Anshan, northern Babylonia, the Sea Land, and central Elamite provinces. His conquests suggested that Šilhak wanted to control all the land between the Tigris and Zagros and also the route most used by invaders. The Mamasenni Lurs plateau, future site of Persepolis, was Šilhak's easternmost conquest. Al-

though Inšušnak was the favored god, temples built during the Shutrukid era served a variety of gods including Suhsipa, Pinikir, and Išnikarap.

Šilhak's successor, Huteluduš-Inšušnak, was in a much weaker position. Instead of *sunki* 'king', he identified himself as *menir* 'prince'. Elamite power ended abruptly when the Babylonians under Nebuchadnezzar I finally, on a second attack around 1110 B.C., defeated Elam in a battle on the Ulai near Susa. For three centuries Elam remained silent.

223 New Elamite Kingdom (ca. 800–640 B.C.)

223.0 In the centuries after 1000 B.C., Iranian tribes began moving into the hinterlands of Elam, particularly the extreme southern Zagros just beyond Anshan. This was to set the scene for the next stage in the history of Elam, the struggle with Assyria.

223.1 Elam is again mentioned in 821 B.C. when Assyria overcame an army in which the Elamites took part. The Elamite king, Ummanigaš, ascended the throne in 742 B.C. By 720, he was able to defeat the Assyrian king Sargon in a battle near Dêr. The chronicles of Babylon record this battle, for with the change of fortunes, Babylon was now Elam's ally against Assyria. He was soon succeeded by Šutir-Nahhunte who changed his name to Šutruk-Nahhunte II. He attempted to restore the glories of the Elamite empire, and took the old title of King (*sunki*) of Anshan and Susa.

The next two short reigns saw his brother Halluduš-Inšušnak deposed by his own son, Kudur-Nahhunte, who was the last king to claim kingship of Anshan. Kudur-Nahhunte was forced to flee when the Assyrian Sennacherib invaded Elam. The next successor, Umman-Menamu (692–687 B.C.), reestablished the alliance with Babylon. Anshan seems to have been lost by this time, presumably to the Iranians. After Umman-Menamu the situation becomes very confused, with rampant feuding in the royal family and a general breakdown of central authority. Some factions supported Assyria, some Babylon. Tepti-Huban-Inšušnak (668–653 B.C.) tried to rally Elam, but without much success. He was defeated by the Assyrian Ashurbanipal. He attempted to set up vassal states, but having suffered revolts and continued instability, Ashurbanipal sacked Susa in 640 B.C. He destroyed the graves of Elam's kings, trampled sacred groves, and leveled the temples. All inhabitants of Elam were made prisoners and removed to Assyria. Susiana became wilderness. The New Elamite Kingdom vanished and with it, the last independent Elamite state.

224 *The Achaemenid Period (ca. 600–300 B.C.)*

224.0 About the time of the destruction of Susiana, Assyrian records mention a king of Parsuwaš named Kuruš. This is Cyrus I (OP *Kuruš*) of the Achaemenids. Since, according to Persian tradition, he was the second king of Anshan, the Iranians must have gained control of that region a generation earlier (Hansman, 1972: p. 109). Cyrus I reached an agreement with Ashurbanipal and sent his eldest son to Nineveh. After Ashurbanipal's death in 629 B.C., Assyrian power declined rapidly, and in 612 an alliance of Medes and Babylonians sacked Nineveh. Susiana fell to the Babylonian sphere. Within a generation the Achaemenids had added Susa to their domains and moved the senior branch of the family there, leaving the junior branch in Anshan. In 550, under the leadership of Cyrus the Great, the Achaemenids burst upon the ancient world with the conquest of Media. Three years later they conquered Lydia, and in 539 B.C. Babylon fell. The Achaemenid Persian Empire was born.

The history of this empire is beyond the scope of this work, but one detail is relevant. Cyrus was succeeded by his son Cambyses, who conquered Egypt but was killed there. In the ensuing confusion the throne was seized by a Median usurper, Gaumata. Darius (*Dārayavauš*) had married Cyrus's daughter and was the heir to the Anshan, i.e., Persian (*Parša*) branch of the clan (and thus had a double claim on the throne). In 522 B.C. he led a revolt and reestablished the empire. One year later he made Susa his administrative capital and soon began building his ceremonial capital city of Parša (Gk *Persepolis*) in Parša near Anshan. Darius set out to make it clear that the empire was his by right and that it was a Persian (i.e., Parša, not Median) empire. To support this claim, he commissioned a plethora of inscriptions, including the great trilingual inscription at Behistun in Old Persian, Elamite, and Akkadian.

Simply put, Elamites ran the administration of the Achaemenid Persian Empire. The most massive set of Elamite documents are those records from Persepolis, dating from the last years of Darius' reign and the early years of Xerxes (*Xšayāršan*). Elamite was an official language of the empire, and Elam had a respected place in it. However, after this period there are no more surviving records in Elamite.

225 *Posthistory*

225.1 **Greek Period** (*Elymais*). Despite the growing attraction for the sea route to India, Susa was on

a main route to the East. The road led down the lower Indus River by Kandahar, Seistan, Persepolis, and eventually through Susa and Artemita (Tarn, 1951: p. 62). Contact with the Greeks had begun during the Achaemenid period. In 331 B.C., when Alexander defeated Darius III in Mesopotamia near Gaugamela, Susa promptly surrendered. Alexander and the Macedonians found forty thousand silver tablets and nine thousand minted darics in the Persian treasury at Susa.

During the Greek era which followed Alexander's conquest, Elam was known as *Elymais*. The region had three Seleuceias, that is, cities of Greek organization bearing traditional dynastic names. Susa was known as Seleuceia on the Eulaeus. Just as in the old Greek cities, Susa had a board called the college of Archontes (Tarn, 1951: p. 17). These cities in turn developed civil colonies as trade settlements. Elymaide in India was a civilian colony from Elymais (Tarn, 1951: p. 10, from Peutinger Table found in K. Miller, *Itineraria Romana*, 1916: p. 787).

Inscriptions were written in Greek at Susa as late as A.D. 21. They described a Greek city with Greek forms, despite the large number of non-Greek citizens (Tarn, 1951: p. 18). During the Greek control of Elam, the Achaemenids had taken the place of the native Elamite kings and were used as such by Greek dramatists.

225.2 *Sassanian and Islamic*

225.20 While Susiana prospered under the Sassanians and during the early period of Islam, there is little mention of the Elamites. However, in the middle of the tenth century A.D., the Arab geographer Iṣṭahri observed that the inhabitants of Khuzistan spoke Persian, Arabic, and Khuzi (Bork, 1925: p. 73). Some scholars believe that the Lurs in the mountains to the north and west of Susa are descendants of the Elamites (Hinz, 1972: p. 22). In any case, in the disruption of urban life following A.D. 1100, all record of Elamite disappeared; see also section 211.1.

226.0 The pattern of Elamite history involves a complex interaction of the lowlands (Susiana) with the highland valleys (Anshan). The widespread and decentralized nature of Elamite civilization meant that it rarely reached the density of achievement of Mesopotamia. However, it had a resiliency that Mesopotamia lacked. The cities might fall, but Elamite civilization would retreat to the hills to sally forth another day. Only when the hills were lost to the Iranians did Elam lose this ability. In any case, for a civilization which was contemporary to Sumer to sur-

vive to see the Romans, and for Elamite speakers to see the arrival of Islam puts it in a longevity class with ancient Egypt and China.

2.3 THE GRAMMAR OF ACHAEMENID ELAMITE

230 *Achaemenid Elamite*

230.0 Our most extensive set of texts comes from Elamite's special relationship with the Achaemenid Persian Empire as an official and bureaucratic language. These data come in two distinct sets; see Hallock, 1958: pp. 256–257 and 1969: pp. 1–3 for discussion of sources. The first, Royal Achaemenid Elamite (RAE) is the language of the imperial inscriptions of the rulers from Cyrus through Artaxerxes II (or III?). Most of the more than eight hundred lines are from Darius I (521–486 B.C.) and Xerxes I (486–465 B.C.). These inscriptions are formal and well written. Except where they have been destroyed there is little difficulty in actually reading the texts. They are commonly found in bilingual and trilingual versions with Old Persian and Akkadian, which provide ready access to their meaning.⁴ The most important by far is the great trilingual inscription at Behistun (323 lines), whose decipherment in the nineteenth century was the key to all of the cuneiform scripts (cf. Pedersen, 1962: pp. 153–163).

The other set of texts consists of bureaucratic records from Persepolis, primarily from the reign of Darius I. The over two thousand texts deal with treasury accounts, receipts and disbursements in kind (payroll, rations, etc.), letters, and journals. These tablets, often hastily written memoranda, are sometimes difficult to decipher. They have been collected and published as the *Persepolis Treasury Tablets* [PTT] (Cameron, 1948), which deals with tablets from Darius I, Xerxes I, and Artaxerxes I (492–458 B.C.), and as the *Persepolis Fortification Tablets* [PFT] (Hallock, 1969), which deals with part of the reign of Darius I (509–494 B.C.) only.

Old Persian (OP) has been a major influence on all the styles of Achaemenid Elamite (AE). Loanwords and technical vocabulary are numerous. Old Persian names in Achaemenid Elamite are the primary key to the phonology and script. Many Achaemenid

Elamite texts are word for word translations (calques) of Old Persian originals.

230.1 The primary sources for the grammar of Achaemenid Elamite are *The Phonology and Morphology of Royal Achaemenid Elamite* (Paper, 1955)⁵ and a series of articles by Richard T. Hallock (1958, 1959, 1962, 1965). Other sources, more oriented toward the older Middle Elamite, but with specific references to Achaemenid Elamite, include Reiner, 1969; Diakonoff, 1967; and Grillot, 1973. The *Persepolis Fortification Tablets* (Hallock, 1969) has the exhaustive glossary for Achaemenid Elamite and includes citations and all previous sources.

231 *Achaemenid Elamite Script*

231.0 Achaemenid Elamite was written in a late and considerably simplified cuneiform script. By its period in the fifth and sixth centuries B.C., its scribal tradition had completely separated from the Akkadian one and had formed a separate school of writing. Achaemenid Elamite cuneiform used signs for phonological entities of the shape V, CV, VC, and CVC along with determinatives, numerical figures, and a few logograms and word signs. While polyphony and homophony had been much reduced, there was some formal ambiguity in the script, and it did not have a straightforward phonological basis. The script was written left to right and could break words at the end of the line. Three vowels (*a, i, u*) were regularly indicated, and a fourth (*e*) was occasionally. The following consonants were indicated in the script: *h, k, t, n, p, m, š, s, z, y, r, l*.⁶ Cuneiform transliteration will be cited in small capitals when in text, and the transcription will be cited in italics.

231.1 The number of CVC signs was comparatively small, and their use was variable. In many cases the middle vowel of these CVC signs was not clearly indicated. Normally, consonant-vowel-consonant sequences were spelled in Achaemenid Elamite by the use of the so-called "broken writing," in which such a sequence was written $C_1V_1-V_2C_2$, where V_2 was different from V_1 and clearly a dummy. This had become the norm to such an extent that the VC signs commonly indicated only two vowels, *a* and either

⁴ RAE inscriptions are cited in the normal manner for Achaemenid inscriptions; cf. Roland G. Kent, 1953: pp. 4–5. This consists of one symbol (usually a capital letter) for the reigning king and another for the location followed by the line number; for example, the Behistun inscription of Darius I is indicated by DB. See Hallock (1969: pp. ix–x) and Paper (1955: p. 3) for specific references. Also see the list of abbreviations for specific citations used here.

⁵ This book has been reviewed by Hallock (1956) and Hamp (1957). Numerous example phrases have been taken or adapted from it, among others. These include Paper, 1955: pp. 71–72(sent. 1–4), 80–84(7–10), 74(11), 46(15), 98(16), 100(17); Hallock, 1959: pp. 5–6(sent. 12–14), 1969: p. 9(sent. 5–6). For all single word citations, see the glossary of PFT (Hallock, 1969).

⁶ Early works on Elamite discussed the possibility of signs for *o* and *lt*. Following current practice, these have been completely rejected; see Paper, 1955: pp. 17, 33–34 for details.

i or *u*. Only the *V_n* series had all four vowels, and only *V_k* had three. The selection of the VC signs that remained in use seems to have depended on their use in writing initial vowels. In broken writing the *i/uC* signs effectively equaled a consonant without any vowel. Thus, *taš* could be written DA-IŠ, DA-AŠ, or TAŠ.

231.2 From the nature of the mixture of signs that were borrowed from Sumero-Akkadian cuneiform, it is clear that Elamite did not have a voicing contrast or a series of emphatic consonants. Usually, only one sign from a voiced-nonvoiced pair had been selected at random. However, in a few cases of CV signs, both signs remained in use. Usually they seem to have been in free variation, but sometimes their use was very consistent in certain words. Thus, it is possible that some contrast was in fact being written, although it is certain that it was not primarily a voicing one. These doublets exist for BA and PA, GI and KI, DU and TU. Maintaining Hallock's conservative handling of the transcription, the voiced consonants will be indicated where used in Achaemenid Elamite, but it should be kept in mind that the variation may be only graphic.

231.3 In many cases Achaemenid Elamite script wrote the so-called double consonants; i.e., CV-CV was also (or only) written as CV-VC-CV. A few words, such as HU-UT-TA- 'do' and TA-AL-LI- 'write', were always written this way. Paper (1955: pp. 7–8) reduced such readings to the simple CVCV transcription. Reiner (1969: pp. 111–116) argues very cogently that this analysis was a mistake. She demonstrates that a careful study of Old Persian and Akkadian loanwords (names in particular) shows that (C)V-CV was used for voiced consonants and that the double consonants (C)V-VC-CV were used for voiceless consonants in the source language. She points out that the system is identical to the manner in which Tamil handles Sanskrit and other loanwords, and concludes that Elamite had a similar sort of phonological system. This system can be summarized as having two series of stops, one lax, commonly voiced, and written with a single consonant, with the other set tense, voiceless, and normally written with a geminate consonant. If this analogy can be carried further, it is possible that it explains at least some of the variation in Achaemenid Elamite's writing of single and double consonants. Tamil has a great deal of often subtle morphological variation indicated by a given form's consonants being either tense or lax. This subtlety is compounded, since in some positions the tenseness is phonologically or grammatically conditioned and hence predictable (and often not written).

231.4 Related problems involved Achaemenid Elamite vowels, namely, vowel length, nasalization, and final vowel. There is no indication of vowel length except for a few words where the vowel is explicitly repeated, i.e., CV-V or V-VC. By convention these vowels are indicated by a macron (¯). However, direct Old Persian influence or a writing convention that a word could not be written with a single sign are the more likely explanations. Vowel nasalization almost certainly existed. Variations in writing with and without the signs IN or UM certainly exist; AE HI-IN-DU-IŠ, HI-DU-IŠ 'an Indian'. Old Persian is probably an influence here, but the same phenomenon can be observed in older stages of Elamite: ME *Hu(m)ban* 'a diety's name' can be written HU-UM-BA-AN, HU-BA-AN, HU-BAN, etc. Where there is such variation, the form with the nasal is taken as the standard.

Final vowels present something of a problem. Due to the syllabic nature of the script, it is not always clear if a final vowel is truly meant or if it is the only convenient way to write a final consonant. There is often great variation in exactly which final vowel was written. Where such a set of vowels exists in the grammatical discussions, it will be rendered by a schwa (ə). However, normal citations will follow Hallock's (1969) choice of final vowel. See section 241.0 for discussion of this same point in Middle Elamite.

231.5 The cuneiform script was not well suited to Elamite. A great many conventions were needed to write it properly, some of which we may never completely understand. Examples include consistency in using certain signs or types of signs (such as CVC) in some words or constructions while using others (such as CV-VC) in what seems to be a parallel case. (See Cameron, 1948: pp. 63–66 for examples and pp. 59–82 for discussion.) In some difficult cases little can be done but present a transliteration of the original cuneiform. However, in most cases, a conservative transcription is possible and useful for Achaemenid Elamite. In this work, the simplified system used by Hallock (1969: pp. 82–86 and 1958: pp. 257–261) is used. His glossary and sign list allow easy access to the original where appropriate.

231.6 Logograms were comparatively rare in Achaemenid Elamite. Common determinatives included those for divinities (Sum DINGIR, abbreviated *d.*), personal names (vertical wedge, DIŠ, abbreviated *v.*), place names (horizontal wedge, AŠ, abbreviated *h.*), and the postposed determinative for logograms (MEŠ, abbreviated *lg.*). Other logograms were used for family and commodities along with a few for writing purposes (KI + MIN 'ditto'). Elamite

used unique word-signs for 'king' (SUNKI) and for 'man' (RUH). There were also a number of pseudo-logograms, where an Elamite word or its abbreviation was followed by the logogram determinative. Cuneiform figures were used for the numbers. Except for numerals and determinatives, most logograms were restricted to specific contexts, such as commodities in economic texts. The overall effect is similar to numerals, capitalization, and Latin phrases and abbreviations used in English, i.e., significant, but few in number and far from overwhelming.

232 Achaemenid Elamite Phonology

232.0 Due to the large numbers of Old Persian and Akkadian loanwords and names in the Achaemenid Elamite corpus, it has been possible to obtain a reasonable idea of the actual phonology involved. This work has been done primarily by Paper (1955: pp. 16–36), who clearly extracted the units involved and their most probable forms. From the script, its variations, and Old Persian and Akkadian names written in Elamite, Paper established the units of the script, which we can safely assume to be equivalent to the phonemes of Achaemenid Elamite. However, he probably went too far towards a minimal solution (cf. Reiner, 1969: pp. 111–116 where she retracts from a similar position). Thus, while fundamentally using his arguments and data, I have re-added a few units following Hallock's arguments and data. The goal is to present as much as possible of phonological detail without the seeming chaos of a cuneiform transliteration. The phonemic scheme according to Paper, with additions in parentheses, is as follows:

p	t	k	i	u
	s	š	z	(e)
m	n	r		a
(w?)	y	l		

232.1 Among the obstruents the three stops, /p, t, k/, are clearly attested without voicing contrast, but with some sort of gemination contrast (tense/lax); see Reiner, 1969: pp. 111–116. Among the three sibilants, /š/ clearly stands in full contrast with the other two. The phoneme /z/ is abstracted from forms in *š* and *z*, but it is used to write loanwords with Old Persian *č*.⁷ The phoneme /s/ seems to represent [s]. However, while /s/ and /z/ are in contrast,

they are only minimally so. Different signs exist for SA and ZA, SI and ZI. In all other cases they fall together. Due to their close patterning, for discussion of phonology and comparative arguments, they are grouped together under the cover symbol *c. This represents the Proto-Elamite (PEI) phoneme which split into Achaemenid Elamite (and Middle Elamite) /s/ and /z/, presumably under the influence of loanwords.

232.2 The specification of the bilabial as /m/ is somewhat arbitrary, since Old Persian and Akkadian loanwords make it clear that it represents both [m] and [v]. The actual phonetic realization is unknown. However, along with /n/, the phoneme /m/ shows clear assimilation to a following stop as a nasal; the script shows *nt* but *mp*; note table 2.3, column III. This indicates that /m/ was at least sometimes [m] in Achaemenid Elamite pronunciation. In grammatical discussions, such a variation in written nasals will be indicated by the symbol *N*. There seem to be no complications with /n/, /r/, or /l/. The phoneme /y/ is problematic, for it is found only in the sign IA (YA). Its ambiguity is matched by /w/, which Hallock reconstructs from uses of *ú* in variable writing of some words; cf. *PFT šalawut* (ŠA-LU-Ú-UT), *Dahiwukka* (DA-A-HI-Ú-UK-KA). The consonant *h* had clearly dropped from any actual pronunciation in Achaemenid Elamite (cf. section 241.1 for Middle Elamite), and signs containing it are only variants for vowel-signs, i.e., *hV* equals *V*. Three vowels, /a, i, u/, are clearly indicated, while /e/ had become sporadic. In contrastive use, /e/ was probably restricted to the first syllable. Otherwise, it seems only to be a written variant of /i/.

232.3 Written gemination definitely plays a role with the obstruents (cf. Reiner, 1969: pp. 111–115) and is certainly involved in some sort of contrast with the obstruents, /m/, /n/, /r/, /l/. Whether this is true gemination, some other sort of tenseness, or an actual contrast in phonemes is still open to question. It is possible that fine distinctions are disguised in the seeming arbitrariness of certain spelling conventions.

The phonemic system described here is a minimal one. There is no doubt that these phonemes exist, except possibly for the dubious ones, /y/ and /w/, which may be allophones of the vowels. However, there may well be more distinctions in use than have been described to date.

232.4 Verb stems in Achaemenid Elamite are basically of the form (C)VC(V) with a few monosyllabic variants CV. The few elaborations such as (C)VCC(V) are due presumably to compounding; *murda* 'to restore' < *mur* 'a place' + *ta* 'to put'. The only major systematic alternation involves so-

⁷ Paper (1955) uses *č* and Hallock (1969) uses *z* to indicate this consonant. In descriptions of Elamite *c* and *z* are largely interchangeable.

called "reduplication" where a verb of the form ${}^1C^1V^2C(V)$ has an alternate ${}^1C^1V^1C^2C(V)$; *bela* : *bepla* 'to set', *kuti* : *kukta* 'to carry'; see Paper, 1955: pp. 40–41 (section 5.2). The significance of this shift is not clear. See section 242.411 for greater detail from the Middle Elamite verb.

233 Achaemenid Elamite Morphology

233.0 The morphology of Achaemenid Elamite is typically agglutinative, with almost all of the morphemes consisting of suffixes on an initial stem or base. There are few, if any, prefixes before the stem, but a few forms have commonly become proclitic on the following word.⁸ The suffixes tend to be simple and straightforward, with a single meaning, or small set of meanings per morpheme. Their use is often contextual, or even truly optional, which makes it difficult to specify exactly what a given form does or means. The significant point of Elamite morphology is that there is very little of it. The word *sparse* implies a lushness which is not there. All of the actual forms can be learned easily in a day, although we may never completely understand their proper use.

Old Persian (OP) is both the blessing and the bane of Achaemenid Elamite. It allows one to know quite precisely what a given passage means, but not necessarily how it comes to mean that. In the morphology there is probably little direct influence in the forms *per se*, but calques must have often distorted meaning and usage. Nevertheless, because we can say with some precision what a form means and how it works, Achaemenid Elamite is a good introduction to the grammar in general and to the morphology in particular. It is, however, late and somewhat distorted.

233.1 The Achaemenid Elamite Noun Phrase

233.10 The Achaemenid Elamite noun consists of simple stem nouns without endings and of nouns with a derivative suffix. There are many loanwords in both groups. Elamite nouns are essentially invariant with the optional expression of number for humans only and a limited number of postpositions to express case relationships. There are no declensions or other morphological classes.

233.11 **Noun derivation.** The suffixes used to derive nouns from other nouns or from verb stems include the following: *-ral-pe*, *-me*, *-da*, *-ən*, and *-(a)š*.

⁸ Examples, which are all from Hallock, 1969 (*PFT*), include *an-* (verbal prefix, meaning unknown), *ha-* resumptive pronoun proclitic (see section 233.251), and *u-* 'my' as a possessive prefix (see table 2.2). All of these forms probably have an alternative explanation.

233.111 The personal ending *-ra* (*-ri*, *-ir*) 'er, one who' and its plural *-pe* (*-pi*, *-ip*) 'ers, those who' form a large set of personal nouns, usually for members of a group (*-ra*) or for the group itself (*-pe*). The *-pe* ending is very common in naming ethnic groups; see Cameron, 1973: pp. 47–48. These endings are used on verb stems to give the *nomen actoris*; note section 233.34.

Hinduyara 'Indian' (<OP *Hiⁿduya*)

Hindušpe 'Indians' : *Hinduš* 'India' (<OP *Hiⁿduš* < Sanskrit)

iršara 'great person, chief'

kurtašra 'worker' : *kurtaš* 'worker, workgroup' (<Akk *gardu*)

kurtašpe 'workers'

sipri 'grandfather'

libar 'servant', *libap* 'servants'

tuppira 'scribe' : *tuppi* 'clay tablet' (<Akk *tuppu*)

kutira 'bearer' : *kuti-* 'to carry'

233.112 The ending *-me* (*-mi*) is used to form abstract nouns, which occasionally become concrete secondarily, from other nouns and verb stems.

sunkime 'kingship, kingdom' : *sunki* 'king'

appanlakime 'transgression' : *laki-* 'cross over'

tuppime 'text' : *tuppi* 'clay tablet'

titme 'tongue'

titkime 'lie' : *tite-* 'utter, tell lie'

libame 'service', cf. *libar* 'servant, slave'

233.113 The ending *-da* (*-te*) forms generalized nouns from nouns and nouns from adjectives; see *PFT* "da."

marrida 'all, everything'

dakida 'other things' : *daki* 'various, other (thing)'

hupimerda 'at that time' : *hupimer* 'then'

233.114 The formative *-əN* (*-um*, *-in*, *-am*, *-an*, *-n*) gives neuter nouns, including those which have secondarily become occupations. These nouns are often weakly abstract (but not as much as *-me*), buildings, substances, or the like.

balum 'storehouse'

iyān 'court'

mušin 'account' cf. *mušimme* 'accounting'

raptam 'adult male goat'

sirum 'spear'

šatin 'priest'

Šušan 'Susa'

tenum 'command' < OP **daina* 'law'

ziyan 'temple'

233.115 The ending *-aš* (*-š*) is used for nonhumans, except secondarily in personal names. It clusters most heavily in native vocabulary around agricultural,

animal husbandry, or food terminology, i.e., in an area in our sources where loanwords would be least expected. It is common in place names. This ending is the most frequent way of assimilating an Old Persian noun.⁹ That the endings *-əN* and *-aš* are separable suffixes and roughly equivalent is attested by the following trio of unglossed synonyms (PFT: p. 725b): *mardam* = *marda* = *marduš*.

araš 'granary' also *-har* 'id'.

bakemaš 'young female goat'

hiš 'name'

kakataš 'a kind of fowl'

kumaš 'ram'

kurakaraš 'bakery' (?)

Kuraš (<OP *Kuruš*) 'Cyrus'

kurtaš 'work group' (<OP < Akk *gardu* 'id'.)

lutaš 'pasture lands'

martukkaš 'service fee paid to herdsmen'

miriziš 'rice' (?) (<OIr **wrizi*)

nupistaš 'mill' (?)

partetaš 'a storage place'

233.12 Plural. The plural ending is *-p(e)*, *-(i)p*, *-pi*), and is normally used only with humans. It comes immediately after the noun stem and before any other endings. It replaces the singular personal ending *-ra* on nouns with that ending; see section 233.111. The plural ending often marks a nationality in general or other mass usage (cf. Cameron, 1973: pp. 47–48). It is not mandatorily indicated, even for humans.

kurtaš 'worker' (in general), 'work group'

kurtašra 'the worker'

kurtašpe 'workers'

marrip 'artisans'

Yaunap 'Ionians'

sunkip 'kings'

taššup 'army'

kurpi 'hands' (?)

233.13 Cases and Postpositions

233.130 Achaemenid Elamite nouns, singular or plural, can be followed by postpositions to indicate case relationships, much as English uses prepositions. Two of these postpositions in Achaemenid Elamite are tightly bound to their noun or pronoun and can be considered true cases, although the distinction is a purely surface one. The first of these, the

accusative in *-n*, is morphologically marked only for the pronouns; see section 233.21 for discussion and details.

233.131 The genitive. The other "case," the genitive in *-na* (*-inna*, *-ni*; also *-ra*) is found only in Achaemenid Elamite and has a complex history of its own; cf. Grilhot, 1973. In Achaemenid Elamite its usage as a genitive ending is uncomplicated, and it is used for all nouns.

(1) u Dariyawiš sunki iršara sunki sunkipinna. (DB.1)

I₁ [am] Darius₂, great₄ king₃, king₅ of kings₆.

(2) u Birtiya DUMU Kurašna (DB.40)

I₁ [am] Bardiya₂, son₃ of Cyrus₄

(3) XIII nan d.ITU.lg. Hanamakkašna pirka (DB.45)

on₃ the 13th₁ day₂ of the month₃ Anāmaka₄

However, a major variant with the ending *-ra* can replace *-na* after persons. This point will be discussed with Middle Elamite; see section 242.221.

(4) u Dariyawiš, sunki iršara, sunki sunkipirra. (DNa.2)

(same as (1) above)

This ending *-na* is also used to form adjectives or their equivalent: *balina* 'male', *iršana* 'big', *hasana* 'adult', *sunkina* 'royal', etc.; see PFT "–na."

233.132 Pronouns used as case markers. Typical of Achaemenid Elamite syntax is the use of nouns and noun phrases in formal apposition. Particularly, pronouns in full agreement with their antecedents are used after nouns to carry case endings or help clarify a meaning. This is common with the accusative, where only the pronoun has any distinct morphology. This construction is the origin of reports on the accusative in *-ir* (cf. Paper, 1955: pp. 74–77). Such usage is also the norm in dative constructions, where there are no endings at all, to repeat the pronoun for the dative just before the verb. Thus, for Achaemenid Elamite nouns the accusative and dative case relationships are normally expressed through the use of otherwise redundant pronouns. Pronouns are regularly used to carry other postpositions in noun phrases.

(5) miteš Mimana ir halpi. (DB.45)

Go forth₁ [and] slay₄ Vivana₂ (him₃).

(6) (90 kurtaš) . . . hupipe kamakaš ap dunušta (PF1940.2-4)

he gave₅ kamakaš₃ to them_{2,4} (i.e., 90 workers₁) (lit. they₂ kamakaš₃ to them₄)

⁹ A parallel example can be seen in Malayalam's wholesale loans from Sanskrit. Unless the Sanskrit word happened to fit Malayalam's norms for nouns, i.e., *nadi* 'river', they were borrowed in *-am*, a Dravidian neuter formative that happened to resemble the most common Sanskrit neuter ending. As a result, the number of Malayalam nouns in *-am* expanded enormously.

TABLE 2.1

Cases and Postpositions in Elamite

No.	AE	ME	Name/Usage/Meaning	Used with	Comments
1a	-n	-n	<u>Accusative</u> , direct object	Pronouns only	Ø ending for nouns. Immediately precedes verb. See section 233.132.
1b	-r			1b) 3rd person variant	
2a	-na		<u>Genitive</u> 'of', possession	Commonly with materials	See section 243.2 for normal ME genitive construction.
2b	-ni	-inni	composition		
2c		-ya		With humans only	
2d	-ra				
3	-(ik)kə	-ikku	Motion toward, Location (near)	People, month names	
4	-ma	-ma	Location 'in, on', 'according to'	Things, time units	Location inherent in place names.
5	-ukku	-ukku	a) 'on, upon', b) 'to'	a) All b) People	b) for actions only
6a	-mar		'from'	Places	
6b	-ikkimar		a) 'from', b) 'by'	People	b) OP calque (?)
6c	-mamar		'from in'		
7		-pat	'under'		
8		-šara	'under'		Possibly 'over' (?)
9		-kuk	'with, after'		
10	-idaka		Association 'with'		Lit. 'placed to it'

233.133 Other postpositions. The remaining postpositions, which are given in table 2.1, are much more loosely attached to the noun. They may go on any word in the noun phrase, on a noun, pronoun, adjective, or another postposition. The postpositions commonly compound in this manner; *-mamar* 'from in', etc. The use of these forms is relatively straightforward, although they can become quite complex (note DE.2 below); see Paper, 1955: pp. 77–84 for numerous examples. Note that periods (.) are the traditional morpheme boundaries in Elamite studies.

(7) *meni Haltamtip u.ikki.mar ipšip* (DB.23)

then₁ the Elamites₂ were frightened₄ by me₃ (lit. from at me)

(8) *meni u taššup paršip Rakkanmar Mišdašbakki tinkeya sap taššup hupipe Mišdašbakki ir parip* (DB.36)

then₁ I₂ sent₇ the Persian₄ troops₃ from Raga₅ to Hystaspes₆ (OP Vištāspa) and₇ when₈ those₁₀ troops₉ reached (lit. they arrived₁₃ it₁₂ to) Hystaspes₁₁

(9) *huhpe tuppi hi.ma inni tallik* (DB.58)

that₁ was₅ not₄ written₅ on₃ this₃ tablet₂

233.14 Adjectives. Adjectives, like almost all modifiers, follow the nouns that they modify. They agree with their nouns in person; *iršara* 'great' (after people), *iršana* 'big' (after things). They are probably best analyzed as appellatives in apposition; see section 030. Except for derivatives suffixes like *-na*, there is no particular morphology for adjectives. Lexical adjectives regularly follow the noun with its postpositions.

(10) *sunki murun hi.ukku.ma azzaka* (DE.2)

king₁ upon₃ (lit. upon on) this₃ great₄ earth₂

233.2 Pronouns

233.20 Achaemenid Elamite has a single set of pronouns, although they probably come from several different sources. They have been summarized in table 2.2. They have four distinct forms: an unmarked nominative/dative, an accusative (and oblique base?), a genitive, and a possessive suffix. The nominative requires no comment except that the same form functions as the dative when it occurs immediately before the verb.

233.21 The accusative. The accusative ends in *-n* in the first and second persons, and in *-r* and *-n* in third person pronouns. The first person singular forms show some evidence for an oblique in *-n* separate from an accusative in *-n*. This is clearest in the accusative form *unan* with both *n*'s attested, but the oblique can also be clearly seen in the genitive *unina* (*unini*).

233.22 Genitives and possessives. The genitive, following the Achaemenid Elamite norm, usually ends in *-na* (or *-ni*). However, stray forms end up in this slot, such as *appie* (presumably from the possessive form), *nuda* (an ambiguous form), and *nukami*. Paper argues eloquently that *u* also functions as a genitive, usually with the possessive enclitics and in stock phrases, as in *u libar.uri* 'my servant'. See section 531.2 for further discussion.

(11) *u Uramasda un nuškešni*. (DNa.5)

May₄ my₁ Ahuramazda₂ protect₄ me₃.

233.221 There is a separate set of possessive enclitics; note table 2.2 and Hallock, 1962 for discussion. The third person singular forms show concord with the gender and number of the noun to which they are attached; thus the forms *-eri* 'his/her' after humans and *-e* 'his/her' after neuters; *libar.eri* 'his servant', *hiš.e* 'his name'. Presumably, the same pattern exists in the first person *-uri* 'my', which is attested only after people. The second person form *-ni* 'your' is clearly attested only in Royal Achaemenid Elamite *h.NUMUN.lg.-ni* 'your family', while the third person plural forms *-pini* and *-pie* 'their' occur only in a limited context. This leaves only the problem form *-ta*. It is found only in Royal Achaemenid Elamite, and only in the phrase *u attata* 'my father', in contrast with *atteri* 'his father'. Upon consideration that it occurs with humans (and thus does not parallel *-e*), and only after *u* 'my', a more reasonable explanation is that it is a resumptive/reflexive pronoun and that *u attata* would more precisely be 'my own father'.¹⁰ Further evidence can be found in Middle Elamite to support this analysis; see section 242.31 and appendix I.

233.23 First person. The first person singular pronoun is based on *u* and *un*. Uniquely, it shows evidence for an oblique *un* separate from the accusative in *-n*; see section 233.21 above. If this is the case, then the accusative in *un* must come from **un + n*. The accusative form *unanku* is quite anomalous and a mystery. The first person plural forms are built on *nuk-*. The genitive form *nukami* is also anomalous.

233.24 Second person. The second person pronouns are straightforwardly built on a stem *nu* with only the possessive *-ni* showing another vowel. The possible genitive *nuda* is aberrant; see the entry in the *Persepolis Fortification Tablets* (Hallock, 1969)

¹⁰ This disagrees with the analysis of *-ta* given in Hallock, 1962. His arguments that *-uri* and *-ta* parallel *-eri* and *-e* are not convincing, and are not supported by Middle Elamite data.

TABLE 2.2

Elamite Pronouns

	ACHAEMENID ELAMITE				MIDDLE ELAMITE		
	Nom./Dat.	Acc.	Gen.	Poss.	Nom./Dat.	Acc.	Poss.
1s	u	un unan unanku	unina unini u	-uri -ta ?	u	un	
1p	nuku		nukami		nuku nika	nukun	
2a	nu	nun	(nuda ?)	-ni	nu (OE ni)	nun	
2p	numi				num, nun	numun	
3s	hi ha-, kaš*	ir, in		-eri -e	ir	ir	-e
3p	appi	appin appir	appini appie	-pini -pie	api	apun apin	-apie
3n	hi, kaš*	ir, in			i	i, in	
3s	hupiri		hupirina				
3p	hupipe						
3n	hupe						
3s	akka akkari						
3p	akkape		akkapena				(see § 242.511)
3n	appa						

*The forms ha- and kaš are used as datives; see section 233.251.

for discussion. Note the unique attestation of a plural in *-m* in the plural form.

233.25 **Third person.** The third person pronouns have explicit deixis with *hi*, etc. indicating 'this' and *hupe*, etc. indicating 'that'; cf. the adjectives *hi* 'this' and *hupe* 'that'. Of the 'here' forms, the

singular is formed on *i* (*hi*, *e*) and the plural is based on *ap(p)*. Neuter forms, as is the norm in Achaemenid Elamite, use the singular forms without explicit reference to number. The 'there' forms are all based on *hupeli*.

The indefinite pronouns *akka* (pl. *akkape*) 'some-

one, anyone' and *appa* 'something, anything' function as relative pronouns. There is only one attestation of an interrogative (*appa*) in Achaemenid Elamite; see Reiner, 1969: pp. 95–96 for details.

233.251 Hallock (1969, *PFT*) describes as a pronoun another form *ha-*, which is always attached to the verb in the meaning of a dative resumptive pronoun 'to/for it/them'. While this is indeed the usage, it is by no means clear that it is the correct description. The form *kaš* also seems to function as a third person dative parallel to *hi*. Its origin is unknown.

hasatiš 'to them he gave as *sat*'
hadukaka 'to it (a horse) it was fed'

233.3 Verbs

233.30 The verb in Achaemenid Elamite is very simple and very frustrating. In spite of all the precise Old Persian verb forms in the parallel texts, it is difficult to arrive at any correlation with the usage of the Elamite verb. It is obvious that Elamite does not work on the same criteria as Old Persian, and that the basic system in Middle Elamite is a general, sweeping one. However, it is not at all obvious just what the contrasts are.

233.31 The "Conjugations"

233.310 Hallock (1959: pp. 1–19) has given us a good description of what forms go together, i.e., he has established paradigms and their translational equivalents. His organization into "conjugations," while neutral in terminology, is not very enlightening or helpful. It has been followed here because it is an adequate, neutral introduction to the form sets, not that these are true conjugations. The numbers (I, II, III) are maintained as labels for groups of forms.

233.311 Achaemenid Elamite has three groups of verb forms. Each of these groups has a secondary set of verbs with a particle *-ma-* added after the verb and before the personal endings. These secondary groups are labeled with an *m*, i.e., Im, IIm, IIIm. The verb, like the pronouns, marks three persons and two numbers. The plural forms are used only with reference to humans, which means that neuters always use the third person singular. No clear examples of second person plural forms exist for any group. Thus, all of the verb proper consists of six groups, each with five endings, for a possible thirty forms. The forms which are actually attested are given in table 2.3.

233.312 Group I contains the normal active forms of transitive verbs. A few are clearly causative and

a few seem to be intransitive. This group is neutral with respect to tense and aspect; see Hallock, 1959: p. 5; Labat, 1951: p. 35. At best, it might be called indicative. Group Im means much the same, but seems to indicate plural action.¹¹ Group II contains intransitives or the passives of transitive stems. It commonly parallels Group I. On the other hand, IIm is iterative-durative and has few passives. Groups III and IIIm are neutral with respect to transitive and intransitive, with both being used, as is inherent in the verb base. Both of them also seem to indicate a present-future. Group III has a punctual aspect and is commonly equivalent to the Old Persian future, while IIIm is iterative-durative in aspect and commonly translates as the Old Persian present.

233.313 Formally, Group I works with a set of personal endings different from Groups II and III. These add their endings to forms ending in *-k* and *-n* respectively, but there are assimilations and inconsistencies. Thus, on formal analysis, II and III contrast with I. On tense, I and II contrast with III; in aspect, I, Im, II, and III contrast with IIm and IIIm. These verbs can be discussed as norms, tendencies, and translational equivalents, but it is very difficult to specify exactly what they mean.

233.32 **Clitics.** Besides these simple finite forms, there are two clitics which are used to extend the system. One, in *-a*, is called the *connective*, and the other, in *-ta*, is labeled *final*. The form *-a* is added after verbs when they are not the final verb in a sentence. It indicates that the verbs are linked in some way and is usually translatable as 'and'. The "final" form in *-ta* is used in subordinate clauses (always in the Royal Achaemenid Elamite inscriptions; see Paper, 1955: p. 49) and on the final verb of the sentence. Its meaning is unclear, but on finite verbs it seems to indicate finality or completion; see Hallock, 1959: pp. 5ff. for further examples and discussion.

(12) *marriša appin halpiš* (DB.47)

he seized₁ and slew₃ them₂

(13) *ap tiriša nanri* (DB.24)

he spoke₂ to them₁ saying₃

(14) *akkape . . . Birtiya ir turnašti* (DB.13)

who₁ . . . knew₄ Bardiya₂ (him₃)

233.321 The ending *-ut/-it* seems to be an added element on the first person and plural forms: *-hut*, *-wut*, *-kit*, *-put*.

¹¹ See W. W. Winfield's (1928: pp. 142–145) grammar of Kui for excellent discussion and examples of the idea of "plural-action" as applied to a verb.

TABLE 2.3

Achaemenid Elamite Verb Morphology (after Hallock, 1959)

FORM CLASSES ("Conjugations")

	I	Im	II	IIm	III	IIIm
1s	∅	-ma	-kit*	-makit	-nki	-manka
1p	-wut/-hut*	-mahut	---	---	-nun	-manun
2	---	---	-kta	-makta	-nti	-manti
3s	-š**	-maš	-k	-mak	-nra	-manra
3p	-š	-maš	-p	-map	-mpi	-manpa

CLITICS

a.	-a	<u>connective</u> : links verbs, nonfinal
b.	-tə	<u>final</u> : in clauses and finally
c.	-ni	<u>precativ</u> : hortative

*The form -(w)ut also occurs after nouns; see section 233.321.

**This form (also ∅ for one verb) is used as the imperative.

USES OF FORM CLASSES

I. Mostly active forms from transitive verbs, a few causatives, a few intransitives. No indication of tense or aspect.

Im. Plural or iterative action.

II. Passives of transitives, intransitives.

IIm. Iterative-durative aspect, few passives.

III. Neutral for transitivity. Present-future punctual (≈ OP future).

IIIm. Neutral for transitivity. Present-future iterative-durative (≈ OP present).

(15) šamakmar nuku sunkipwut (DB.4)

we₂ [were] kings₃ successively₁(?) (lit. from šamak [?])

-(a)š, the same as the Group I third person ending, except for the verb *mite* 'go forth', which regularly has the stem. There seems to be no indication of number or other variation. A precativ-hortative

233.33 Imperatives. The imperative ending is

(‘may ____’) in *-ni* on the finite verb (attested only in the third person) is a regular formation. There are no other modals attested.

huttaš ‘do!’

mite ‘go forth!’

nuškišni ‘may he protect’

233.34 There are other verbals in Achaemenid Elamite. There is a general gerund consisting of the stem *hutta-* ‘doing’. This has personal variants made by adding the third person endings *-ra* and *-(i)p* to the stem; *huttura* ‘doer’, *huttiṭ* ‘doers’; cf. section 233.111. These forms also exist for form-classes Im, III, and III_m; *huttam(a)* ‘doing’, *huttaman(a)* ‘doing’, *hallumar* ‘injurer’. Verbal adjectives identical to the third person forms of Group II are clearly attested; *huttuk(a)* ‘done’. There is no sharp division between verbal adjective and noun in these forms. See Hallock, 1965: pp. 121–125 for details and discussion.

233.4 Particles

233.41 **Numerals.** Few numerals are attested except for *ki* ‘one’, *kir* ‘one person’, due to the use of figures in the script. These regularly follow the noun to which they are attached. Other attested numerals in Achaemenid Elamite are *atbazaš* ‘three, three times’; *pirnuba* ‘one-half’; and *tan* ‘one-half(?)’. Related words include *unra* ‘each’ (see section 422: 13), *lurika* ‘singly’, *mar-* ‘all’ (*marrida*, *marbepda*, etc.), and *kirmaka* ‘all’ (lit. ‘put as one’[?]). Morphemes associated with numerals include ordinal markers *-ummemana* and *-edana*, fraction formatives *-irmaki* and *-kurmaki*, and noun formative *-peda*.

233.42 **Other particles.** Conjunctions consist of *āk* (A-AK) ‘and, but’ and *kudda* (*kutte*) ‘and, furthermore’. More general sentence conjunctions include *meni* ‘then, after that’ and *zila* ‘so, thus’. The conditional particle is *anka* (also *naka*?). Negatives consist of the general negative *inni*, the word *inna* ‘no’, and perhaps *inri* (?). The prohibitive particle is *anu*, which is used before the gerund in *-n(a)*. The quotational morphemes (spoken quotation marks) consist of *ma(n)* with the Group III endings. Basic adverbs include *am* ‘now’, *hamer* ‘at that time’, *madda* ‘here’, and *hami* ‘there’ among many others.

234 Achaemenid Elamite Syntax

234.0 Relatively little can be reliably said about Achaemenid Elamite syntax because so much of it is a calque on Old Persian or is otherwise influenced. What we can be sure of is restricted to fairly simple

things such as basic word order. Achaemenid Elamite was a typical Subject-Object-Verb language. The subject normally comes first in the sentence with the main verb last and the object, direct and indirect, immediately in front of it. Adjectives follow nouns as do possessive pronouns (with the exception of *u* ‘my’).

234.1 The only syntactic construction peculiar to Achaemenid Elamite which is worth mentioning is the relative clause construction. Relative clauses follow the noun to which they are attached. They are introduced by relative pronouns, *akka* for people ‘who’, and *appa* for things ‘which’. They then follow normal word order with the verb at the end of the clause. This verb often has a clitic *-tə* (*-ta*; always in Royal Achaemenid Elamite). The main point is that the use of relative pronouns seems to be a direct calque on Old Persian, or at least an optional construction which is always used under Old Persian influence.

(16) *nappi iršara Uramasda akka murun hi bešta akka kik hupe bešta akka ruhrrar bešta akka siyatiš bešta ruhrana akka Ikšerša sunkir huttašta* (XPa.1ff)

a great₂ god₁ is Ahuramazda₃, who₄ created₇ this₆ earth₅, who₈ created₁₁ that₁₀ sky₉, who₁₂ created₁₄ mankind₁₃, who₁₅ created₁₇ happiness₁₆ for man₁₈, who₁₉ made₂₂ Xerxes₂₀ king₂₁

(17) *nu akka meššin tuppi hi ziyanti appa u tallira hi innakkanuma pattikarram anu sarinti* (DB.65)

you₁ who₂ later₃ will see₆ this₅ inscription₄ which₇ I₈ wrote₉ and₉ this₁₀ sculpture₁₁, patikaram₁₂ [OP gloss], do₁₄ not₁₃ destroy₁₄ [them]

2.4 THE GRAMMAR OF MIDDLE ELAMITE

240 Pre-Achaemenid Elamite

240.0 The pre-Achaemenid corpus comes in three more or less distinct periods; see Reiner (1969: pp. 57–68) and Grilot (1973: pp. 116–118) for a detailed discussion of these texts. The first, Old Elamite (OE), consists of the cuneiform documents from the period of the kingdom of Awan. Except for the brief texts (see Lambert, 1974) the sole Old Elamite document is the so-called Treaty of Nārām-Sin. This is fragmented and poorly understood. It concerns some sort of agreement between Sargon’s grandson, Naram-Sin, and the ruler of Elam. The next documents are attributed to the period of the Sukkal-mah and to Šiwepalarhuppak. If authentic, these two inscriptions are the sole source for Early Middle Elamite. However, on the basis of style and language Reiner (1969: p. 58) feels that these were composed at a later date.

The next group of texts comes from the Classic Elamite Empire of the twelfth and thirteenth centuries B.C. These consist solely of dedication inscriptions on buildings and cult objects. While numerous, they are highly repetitive. A few Akkadian inscriptions establish parallel texts, which can be helpful, and the sole Middle Elamite bilingual comes from this period; see appendix I. After a break of over three hundred years, sources reappear as Late Middle Elamite (LME) from the New Elamite Kingdom of the seventh and sixth centuries with a somewhat wider format. Besides inscriptions, there are the economic texts from Susa, letters, a sole literary text, and miscellaneous inscriptions and tablets. No Elamite document written for and by Elamites is known after the fall of Susa in 640 B.C.

Except for occasional comments on specific words, Old Elamite is so poorly understood that it must be ignored. While there is clearly development and change from earlier to later, the Middle Elamite of the thirteenth and sixth centuries remains the same language. Since little can be said about Late Middle Elamite, which is not described in Achaemenid Elamite or classic Middle Elamite, this discussion will concentrate on the Middle Elamite of the thirteenth through eleventh centuries B.C., i.e., of the classical period. It is reasonably well understood.

240.1 The primary source for Middle Elamite grammar is "The Elamite Language" by Erica Reiner (1969). Other major sources are largely derivative (Diakonoff, 1967), limited to specific topics (Grillot, 1973), or extremely brief (Labat, 1951). Significant articles on single topics include Grillot, 1970 and Hallock, 1973.¹² Lexical resources are primarily from Choga Zambil, Stève, 1967: pp. 117–129 (*MDP* 41); Lambert, 1965: pp. 28–38; and the discussion of the Middle Elamite bilingual in Reiner, 1969: pp. 116–118 with the Old Elamite additions of Lambert, 1974: pp. 3–14. The glossary in König (1965: pp. 181–228) is very extensive. Unfortunately, the definitions are not as reliable as might be hoped. Nevertheless, it is the standard citation for all textual material up to 1965. References to it are indicated by the abbreviation *EKI*.

241 Middle Elamite Script and Phonology

241.0 The cuneiform script of Middle Elamite (ME) was tied much more closely than Achaemenid

Elamite to current Akkadian practice since it was a provincial school of a varied scribal tradition. In formal inscriptions the signs were the same as in Mesopotamia, although there were differences in the use of some signs. Unfortunately there is little possibility for any correction in the vagaries of the script, since Akkadian names and new loanwords were written in the same script. Any transcription of Middle Elamite is based only on variations in writing and on extrapolations from Akkadian and Achaemenid Elamite. This is inherently less certain than the transcription of the Achaemenid form. As a result, the transcription of Middle Elamite will be restricted to grammatical discussions, lexical entries, and closely studied texts such as the Middle Elamite bilingual; see appendix I. It will consist of dropping extra vowels (*ša-ak* = *šak*) and other obvious changes. In this transcription, final variation of *a*, *i*, and no vowel will be indicated by a schwa (ə). This variation may be only graphic, but it may have a syntactic significance; see section 243.3. Also a variation between *n* and *m* will be indicated by *N* in grammatical discussion; see section 232.2. Examples of Middle Elamite will be given in the traditional transliteration of cuneiform, as in the standard Elamological works.¹³

241.1 A few changes can be discussed in phonological terms. First and foremost, Middle Elamite has a contrastive /h/ which plays an active role in verbal morphology. It seems clear that it is not the velar fricative *h* [x] of Akkadian, but its real nature is unclear. It may be a voiceless vowel, i.e., [h], a glottal stop [ʔ], or some similar weak glottal consonant.¹⁴ In any case *h* is a satisfactory cover symbol. Except for this addition, the phonology of Middle Elamite seems to be much the same as Achaemenid Elamite; cf. section 232.

241.2 There are vowel changes in some Middle Elamite words, but it is difficult to tell if this is a true phonological change, a variation in the script, or some combination of the two. There is a common confusion of the vowels *i* and *u*. From Old to Middle Elamite there are a few definite shifts of *i* to *u*, particularly the second person pronouns OE *ni*, ME and AE *nu* 'you' (cf. section 422:63). Between Middle Elamite and Achaemenid Elamite, the former favors spellings in *u* while the latter favors spellings in *i*

¹² Examples, on the whole, have been taken or adapted from other discussions. These include Grillot, 1973: pp. 120–122 (sent. 7–11), 138(1,2); 1970: p. 219 (sent. 4,5); Reiner, 1969: p. 94 (sent. 3); and Diakonoff, 1967: p. 98 (sent. 6). All examples are cited from König, 1965. See the same for concordances.

¹³ The conventions and standards of König (1965, *EKI*) will be used here, except for minor changes in citing determinatives. König's standardization of personal and place names will also be followed in the general text. See also for the sign list.

¹⁴ Compare the *h* of Brahui, which varies between [h], [ʔ], and nothing giving [bra:hu:i:], [bra:ʔo:e:], and [bra:o:e:] as legitimate pronunciations of its name.

(see section 311.43); cf. ME *turu-*, AE *tiri-* (section 422: 54); ME *zukka-*, AE *zikka-* (422: 39); ME *hute-*, AE *iddu-* (422: 19). At all periods of Elamite *e* tends to go to *i*, often giving doublets; ME *tengi-*, AE *tinke-* (section 422: 55), ME *mete-*, AE *mite-* (appendix II, C20).

241.3 The determinatives and logograms (Sumero-grams) are comparatively few. Except for the determinatives for divinities (DINGIR, d.), personal names (DIŠ, v.), wooden objects (GIŠ), place names (AŠ, h.), and logograms (MEŠ), the only common logograms are for such words as 'god', god's names (DINGIR.GAL, *Napiriša* = Humban [?]) and women (ŠAL, f.); cf. section 231.6 for similar Achaemenid usage. The only place where ideograms are commonplace is for commodities in economic texts. Middle Elamite used word-signs for 'king' (SUNKI) and 'man' (RUH), and pseudologograms where an Elamite word or its abbreviation was followed by the determinative for logograms (MEŠ). We do not know why the seemingly extraneous MEŠ was used here. Middle Elamite script is part of one, unbroken tradition with Achaemenid Elamite and the same conventions are used in transliterating it; see section 231.5.

242 Middle Elamite Morphology

242.0 Middle Elamite presents a much clearer picture of Elamite morphology than does Achaemenid Elamite. This is not so much in the actual forms involved, which are similar, but rather in the system and organization by which they are put together. Middle Elamite morphology is even simpler, since the few forms involved now fall into a few regular patterns. On the other hand, the massive amounts of translational equivalents typical of Achaemenid Elamite are missing. If a form is ambiguous, it is likely to remain so unless massive documentation can be brought to bear. Even then the arguments are statistical.¹⁵ It is difficult to settle an argument with Middle Elamite data.

242.1 Appellatives

242.10 The great morphological contrast in Middle Elamite is between the appellative and nonappellative systems (see section 030 for a general discussion of appellatives). In the standard Middle Elamite terminology, the appellatives are called the "nominal inflection" while the nonappellatives are called the "verbal inflection" (for verbs), simple nouns, or indeclinables. To bring this terminology into line with

Dravidian usage, the term *appellative* will be used in this discussion, but with the parallel terminology according to Reiner (1969: pp. 75–78) pointed out.

An appellative consists of any nominal (noun, pronoun, adjective, numeral, verbal, but not a fully finite verb) together with an ending expressing person and number. These personal endings may be related to, but are usually distinct from, the ones used for finite verbs. These appellatives may be used as predicates, commonly when built on a verbal, but equally easily on a noun with an implied verb of identity. These appellatives can also be used for other purposes with nouns—a possibility which Middle Elamite greatly exploits, since it uses appellatives in its equivalent of a genitive construction.

242.11 Middle Elamite has not one, but two full appellative systems and a third closely allied system of derivation; see table 2.4. The first group of appellative endings (column A) is used in predicates and for nouns, either independently or in apposition. It is attested in first person singular *-k* and plural *-unka*,¹⁶ a second person singular *-t*, third person human singular *-r* and plural *-p*, and a third person nonhuman ending of nothing (Ø).

The second group of appellative endings (column B) is used in the noun modifier ("genitive") system; see section 243.2. The personal endings (first, second, third human) are the same except that the first plural is unattested (does not exist?) and that these forms commonly end in a vowel (*i* or *a*, here indicated by *ə*). However, the (third person) nonhuman ending is *-me* (and also *-ni*; see Grillot, 1973: pp. 126–129). These endings are morphological and hence regular and predictable. The third system of endings closely related to these is derivational, which implies that it need not be completely regular since each new term becomes a word in its own right. These are given in column C of table 2.4. They exist only in the third person, with the human endings the same as column B appellatives (i.e., *-rə* and *-pə*). There are several nonhuman forms including a zero ending; see section 242.21 for discussion. The plurals of simplex nouns also enter as a related subsystem (column D and section 242.20).

242.2 The Noun

242.20 The basic morphology of the Middle Elamite noun is little different from that of the

¹⁵ Note Grillot (1970) on the use of *-a* as a subordinator and the counterinterpretations in Hallock, 1973. Also note Grillot (1973: pp. 143–145) on the contrast between final *-i* and *-a*.

¹⁶ Hallock (1973: p. 151) has made a good case for the first person plural ending *-unka* in Middle Elamite as well as *-un* in Achaemenid Elamite. Reiner (1969) and Grillot (1973) do not follow his proposal. However, the contorted argument in Reiner (1969: pp. 79–80) leaves the as yet unanswered proposal by Hallock standing as the most coherent analysis to date.

TABLE 2.4
Person and Number Endings in Middle Elamite

Gender/ Person	APPELLATIVES (Nominal Infl.)				NOUNS				VERBS (Verbal Inflection)	
	General A		"Genitive" B		Derivative C		Simplex D		Sing.	Plural
	Sing.	Pl.	Sing.	Pl.	Sing.	Pl.	Sing.	Pl.		
Human										
1.	-k	-unka*	-kə						-h	-hu (<h+h)
2.	-t		-tə						-tə	-hti
3.	-r	-p	-rə	-pə	-rə	-pə	-∅	-p	-ṣ	-hṣi
Neuter (3n)	-∅		-me -ni**		-me -n -t -∅		-∅	-p		

* After Hallock (1973:151)

** After Grillot 1973:126-129.

Achaemenid Elamite one. The added detail is that it can now be better fitted into an overall morphological pattern. The noun consists of a base which may be either a simplex stem or a stem plus a derivative morpheme. Noun stems have no particular structure, but tend to have only one or two syllables. This can be followed by the plural marker *-p*, which is normal for humans, but very rare for nonhumans; see table 2.4, column D. This in turn may be followed by a series of postpositions which express some case relationships. An addition to Middle Elamite is the use of still further appellative endings (column B) to indicate phrase structure. These endings go on the very end of nouns or on the end of noun phrases; see section 243.2.

242.21 Noun derivation. The endings used to derive nouns from various sources are the same as in Achaemenid Elamite (cf. section 233.11) and are given in table 2.4, column C.

242.211 As in Achaemenid Elamite (section 233.111), the personal ending *-ra* and its plural *-pa* derive nouns for the persons associated with a noun or verb (occupations, group names, etc.).

hussip, HU-US-SI-IP 'masons'

kitinir, KI-TIN-IR 'protector'

petir, PE-TI-IR 'enemy'

242.212 The ending *-me* forms abstracts or other neuter nouns; cf. sections 233.112 and 242.11.

sunkime, SU/ZU-UN-KI-ME 'kingdom, kingship'

sitme, SI/ZI-IT-ME 'fortune'

tak(ki)me, TA/DA-AK-KI-ME, TAK-ME 'life'

242.213 The ending *-ta* forms neuters. It is difficult to further specify the meaning; cf. section 233.113.

halat, HA-LA-TE 'unbaked brick', cf. hal 'land'

halte, HA-AL-TE 'door' (see appendix I)

Hatamti, HA-TAM-TI 'Elam'

Nahhunte, D.NAH-HU-UN-TE 'Sun (deity), the sun'

puktā, PU-UK-TI/TU₄ 'help'

242.214 The ending *-a*N (*un, um, an, im, in*) forms neuter nouns which are weakly abstract or deal with location and construction; cf. section 233.114. See Grilhot (1973: p. 125) for additional possible connections.

murun, MU-RU-UN 'earth', cf. mur 'place'

mašum, MA-ŠU-UM 'site'

siyan, SI-IA-AN 'temple'

erentim, E-RI-EN-TIM 'fired brick'

kiten, KT-TE-EN 'justice' (?)

huhun, HU-HU-UN 'wall'

242.215 The ending *-(a)š* is much less common than in Achaemenid Elamite (cf. section 233.115).

However, it does occur sporadically and is found in some proper nouns.

araš, A-RÁŠ 'possession' (?)

hiš, HI-IŠ 'name'

242.22 Postpositions. Most postpositions are used much as in Achaemenid Elamite; see table 2.1 and section 233.13. The one major exception to this is the genitive, where Achaemenid Elamite uses the ending *-na* (see section 233.131), while in similar instances Middle Elamite uses the syntactic device of appellative concord; see section 243.2. However, in some constructions, Middle Elamite uses the endings *-inni*, *-(y)a*, and even *-na*. Note examples a and b in the following sentences.

(1a) a-ak e-ri-en-tim-ia ku-ši-ih (EKI.29.IV)

(1b) a-ak e-ri-en-tu₄-um-na ku-ši-ih (EKI.45, §10)

(1c) a-ak e-ri-en-tu₄-um-ma ku-ši-ih (EKI.32.IV)

and₁ I built₃ [it out] of fired bricks₂

(2a) te-ti-in la-an-si-ti-ia(-ma) (EKI.48.10)

(2b) te-ti-in la-an-si-ti-in-ni(-ma) (EKI.46.8)

(2c) te-ti-in la-an-si-ti-im-ma(-ma) (EKI.35.V)

(on₃) [a] column₁ of gold₂

242.221 Origins of *-na*. Grilhot (1970, 1973: pp. 145–152) has argued that the clitic *-a* (see section 242.441) is a marker of subordination whenever it occurs in Elamite.¹⁷ As such, it can be used in a few cases of material or composition (note sentences 1a and 2a) directly as a genitive ending. In this use it parallels another ending, *-(in)ni* (note example 2b above), which Grilhot (1973: pp. 126–129) takes to be a neuter appellative largely paralleling *-me* in its syntactic function; note examples 1c and 2c and see table 2.4, column B. It is possible for both endings, i.e., *-(in)ni* and *-me* to occur combined with *-a* on the same noun as *-na* and *-ma* respectively; note examples 1b, 1c, and 2c. In this analysis *-ma* from *-me* and *a* must not be confused with the locative *-ma* 'in, on'; note both usages in sentence 2c.

In Grilhot's analysis, *-na*, like *-ma*, is a combination of a neuter appellative with a subordinating clitic *-a*. As such, *-na* properly goes with neuters while the parallel form, human appellative *-(i)r + a* i.e., *-ra*,

¹⁷ Grilhot has pushed her hypothesis very hard, and it has been an insightful one. However, in my opinion she has not yet proved that a single morpheme is involved, rather than two (or more?) possibly related morphemes. Nor has she proved that subordination is the best description for the verbal process; cf. Hallock, 1973. Nevertheless, this hypothesis is a valuable (if extreme) one that has helped clarify a great deal about the structure of Elamite. Grilhot is to be congratulated even in demerit.

goes with persons. This is normally the case in Middle Elamite. The shift to Achaemenid usage involved only the loss of gender concord constraints. This allowed *-na* to be used with persons, i.e., *-na* came to be used as a unit genitive ending. However, even in Achaemenid Elamite, *-ra* remains a legitimate alternative for humans; see section 233.131, paragraph 2. While there are problems with the breadth of Grillot's thesis, in this case she has elegantly explained the similarity of genitive usages in Middle Elamite, the morphological origins of Achaemenid Elamite *-na*, and the basis for its alternation in Achaemenid Elamite with *-ra*. As she (1973: p. 153) says,

Les différents auteurs qui ont incidemment abordé ce sujet, considèrent ce suffixe de génitif, comme une innovation de l'époque achéménide, et comme un élément apparemment étranger au système antérieur des suffixes nominaux.

La postposition *-na* semble, au contraire, s'inscrire dans l'évolution même du système suffixo-nominal proprement élamite, et paraît représenter, dans cette évolution, une phase tardive de la construction d'appartenance. Pour nous, elle est, en réalité, formée du suffixe nominal neutre *-n(-)*, renvoyant à un élément (nom ou pronom) précédemment nommé, et de la voyelle suffix *-a*, qui indique que le mot, ou le groupe nominal, régit par cet indice *-n(-)*, est subordonné à l'élément préposé.

La postposition génitive *-na* s'insérerait ainsi dans le jeu normal des suffixes nominaux employés par la langue. Mais à une certaine époque (au début du premier millénaire environ) ses deux éléments, consonne et voyelle, paraissent s'être soudés, pour former dès lors une postposition stable.

242.3 Pronouns

242.31 Personal pronouns. Personal pronouns in Middle Elamite have two basic forms, a general form labeled the nominative and a marked accusative in *-n*; see table 2.2. For the first person forms this gives *u* 'I', *un* 'me', *nuku* 'we', and *nukun* 'us'. The second person forms are built on a stem *nu* with a plural in *-m*; *nu/nun* 'thou/thee' and *num/numun* 'you'. The third person forms are built on *i* for the singular and neuter and *api* for human plural. Human singulars normally have the appellative ending *-r*, hence *ir*, while accusatives in *-n* are possible but not mandatory.¹⁸ Only the third person forms have distinct possessives: *-e* 'his, her, its' and *-apie* 'their'.¹⁹

¹⁸ Middle Elamite pronominal forms can be extremely ambiguous. See Reiner, 1969: pp. 90–92 for a detailed discussion of the problems involved.

¹⁹ It is possible that if *-a* is a genitive/subordination marker (see section 242.221), then pronominal *-e* represents **iya* and *apie* < **apiya*.

Forms such as *-uri* 'mine' are certainly common, but in Middle Elamite terms they are clearly column B (table 2.4) appellatives on the nominative stems, i.e., *u+ra*; cf. section 243.2. The third person forms are clearly resumptive in nature rather than simply third person. There is no indication of deixis. The reflexive enclitic *-te*, which is found in Achaemenid Elamite as *-ta* (see section 233.223), appears in Middle Elamite in *halte.te* 'its door'. See appendix I for discussion.

242.311 Also, Middle Elamite has a set of double pronouns occurring with some postpositions. In these cases, the postpositions which follow the pronouns are themselves appellatives in agreement with the pronoun. This results in the pronominal form being affixed both fore and aft, around the postposition. Hence, *ri.ukku.rir* 'on him', *pi.ukku.pip* 'on them', *ir.šara.ra* 'under him' (periods are the traditional morpheme boundaries in Elamite). The first elements do not seem to be clear in vowel quality. There may be some sort of agreement system in operation which is not understood.

242.32 The pronouns *akka*, *akkar*, *appa* which function as relatives and universals (*akkar inri* 'no one') are claimed by Reiner (1969: p. 86) to be interrogatives in origin. The word *akka* is for animates, *appa* for inanimates. Except for the adjective *hu(h)* 'that, this', there are few attestations of any deictics in Middle Elamite.

242.4 The Verb

242.41 The verb system in Elamite consists primarily of forms of the bisyllabic shape CVCV and rarely of the monosyllabic shape CV(C); *šari-* 'to cut', *turu-* 'to speak', *pari-* 'to go', *ta-* 'to put', *na-* 'to say'. Other variations include: type (1) geminate bisyllabic types, (C)VCCV, where the geminate consonant may be not only graphic, but is probably indicative of some sort of phonological contrast: *hutta* 'to do', *tallu* 'to write', *šinni* 'to approach'. Type (2), bisyllabic stems with consonant clusters, seem to be compounds: *murta* 'to erect, install' (lit. 'put in place'), or derivative: *halpu* 'to kill, slay', but their exact nature is usually not known. Type (3) are polysyllabic stems: *šullume* 'to prolong', *šalhupa* 'to decorate (?)', which always seem to be compound forms. In other words, verb stems are primarily of the form CVCV with variants (C)V(C) and (C)VCCV. In addition, compound and other derivative stems may be created in the form (C)VC + CV or are polysyllabic.

242.411 **Reduplication.** The major type of stem development is the so-called reduplication, where a

TABLE 2.5

The Basic Verb Paradigms in Middle Elamite (hutta- 'to do')*

Person/ Number	TRUE VERB Indicative	APPELLATIVE VERBALS	
		"Passive"	"Active"
1s	huttah	huttakə (< k+kə)	huttankə
1p	huttahu (< h+h)	huttakunkə	huttanunkə
2s	huttat(i)	huttaktə	huttantə
2p	huttahti	—	—
3s	huttaš	huttakrə	huttanrə
3p	huttahši	huttakpə	huttanpə
3n	huttaš	huttak	huttan

* In addition, there exists the possibility of all of these forms having *-ma-* added to the stem: *huttamah*, *huttamakə*, *huttamankə*, etc.

verb of the general formula ${}^1C^1V({}^1C)C^2V$ has a variant ${}^1C^1V^1C^2C^2V$: *pela* : *pepla* 'to effect', *sinki* : *siski* 'to sink', *tallu* : *tatalli* 'to write,' etc. Sometimes the process seems to indicate iterative action or repetition, but this by no means clear. Labat (1951: p. 30) considers that these forms are derived from truly reduplicated roots, i.e., ${}^1C^1V^2C^2V \rightarrow {}^1C^1V^2C^2V^1C^1V^2C^2V > {}^1C^1V^2C^1C^2C^2V > {}^1C^1V^1C^2C^2V$: **pela-pela* > **pelpla* > *pepla*.

242.412 **Enlarged stems.** In addition to normal compounding and derivation, there is another morphological process which adds a morpheme to the verb stem before all other endings. It is not clear where these morphemes come from or how they function, so it seems best to go with Reiner's (1969: p. 79) neutral terminology of *enlarged stems*. By far the most important is *-ma-* which, in principle, can occur with all verb forms. There is little clarification of its function beyond what is known of Achaemenid Elamite; see section 233.31. It looks as if it might be an auxiliary verb in origin, but this speculation clarifies little. Reiner (1969: pp. 78–79) also discusses two other morphemes, one *-r-* is always combined with *-ma-* as *-r-ma-*, the other is a rare form *-nu*. Except for one form (*kite.nu.h*), this form is Hallock's Conjugation III, first person plural *-nun*. Hallock's *-n-un* is analyzed by Reiner as *nu-n*; see section 242.11 and footnote 16 for discussion on this

point. Thus, the morphemes used are *-ma-*, *-r + ma-*, and possibly *-nu-*.

242.42 **The finite verb.** The verb in Middle Elamite has a simple distinct morphology of its own along with a somewhat more extensive subsidiary set of forms using the appellative system. Properly speaking, the Elamite finite verb consists of a single paradigm which inflects for two numbers and three persons. Adding in the suffix morpheme *-ma-* (extended stem) for all of the above gives a theoretical maximum of twelve forms. The person and number endings for the verb are quite distinct from those of the appellative system, especially in the third person where they do not even pattern together; see table 2.4, column E. Note the distinct plural marker *-h-* which disappears in the first person plural. However, a vowel is added, i.e., *-hu* < **-h + *h*. Except for the final vowel of this *-hu*, the presence or identity of a final vowel on these endings is complex. Most of them alternate between no vowel, *i*, or *a*. The endings are given in table 2.5 with the form they most frequently take; the variation between *-i* and *-a* is indicated by *-ə*. See sections 241.0 and 243.3.

242.421 The imperative in Middle Elamite consists of the second person forms of the verb and has no separate morphology. See section 242.443 for a parallel usage with the precative.

242.43 **Verbals.** Verbals in Middle Elamite consist

of two participles, one in *-n* and one in *-k*, along with the direct use of the verb stem as a verbal (Grillot's [1973: p. 125] infinitive). The participle in *-n* is "active," which seems to be nonpast and progressive. The one in *-k* is "passive" and seems to mark mediopassives or intransitives.

242.431 If the appellative endings (column A; table 2.4) are added to these two participles, the remaining parts of the functional verb are obtained. These are the so-called nominal conjugation, i.e., appositives, of Reiner (1969) and Grillot (1973). The simple verbal predicate thus has the set of forms given in table 2.5.

Thus, except for two cases involving geminate consonants, $*h + *h > hu$ and $*k + *kə > kə$, the morphology of the Middle Elamite verb simplifies itself to a simple, transparent paradigm. It is these forms repeated with a plural marker *-h-* and the appellative endings (column A) added straightforwardly on two participial bases. A simpler functional verb system is difficult to imagine. It is almost impossible to add any more details on the use of the forms than what has already been described for Achaemenid Elamite; see section 233.313. Middle Elamite forms do not lend themselves to such precision in meaning. On the other hand, there is little to contradict the Achaemenid Elamite description as being essentially functional in Middle Elamite.

242.44 Verbal Clitics

242.440 In addition to the verbal morphology described in the foregoing section, there is a small set of clitics added to the verbal forms (proper verb and appellatives) to indicate specific functions. These include the syntactic markers *-a* and *-ta* and the precativ *-ni*. See Reiner, 1969: pp. 80–82 for a detailed discussion.

242.441 The primary clitic from the point of view of theoretical interest is clearly *-a*. This enclitic has engendered a great deal of discussion among Elamologists. Hallock (1959: pp. 5–6, 11–12) analyzed this form for Achaemenid Elamite as a "connective," in which the verb marked in *-a* is not finite and is semantically connected with a following verb. It can be taken in many cases as equivalent to 'and' between verbs, although other semantics are possible; AE *tiriša nanri* (DB.24) 'he spoke₁ saying₂' (lit. 'he spoke-*a* he said'). Reiner (1969: pp. 80–81) agrees with Hallock's analysis and extends it to Middle Elamite.

In the time since, Françoise Grillot (1970, 1973: pp. 145ff.), in her attempt to arrive at a sweeping

generalization about Elamite grammar, has everywhere analyzed *-a* as a mark of subordination. The analysis includes this verbal use of *-a* and the genitival use of *-a* discussed in section 242.221. She would consider them as part of one large configuration.

Hallock (1973) replied to Grillot's (1970) article, challenging several readings and concluding that "subordination" is too restrictive a description of *-a*'s use. As Hallock (1973: pp. 150–151) expresses it:

There is the further difficulty of explaining how the meaning of Middle Elamite *-a*, if it expresses subordination, can develop into the meaning of Ach. *-a*, which is a sort of connective, and surely does not express subordination.

It is much easier to assume that *-a* points forward, as a particle of anticipation. Several passages (especially VIIa—1, discussed above) strongly favor this conclusion, and there does not seem to be any real evidence against it.

Grammatical subordination, then, is essentially without outward indication; it has to be assumed from context, sometimes aided by *akka*, "he (who)," *appa*, "that (which)," *muru*, "place (where)," and by the personal suffixes *-ri* and *-pi*, mentioned above.

As for "subordinate" verbs without *-a*, we may provisionally say that where they occur the writer chooses not to express the anticipatory nuance. Further study may yield a more refined distinction.

In conclusion, the verbal clitic *-a* indicates non-finiteness and semantic connection at some level, probably primarily looking forward to the finite verb. It may be connected to the genitival *-a* used in noun phrases in an overall process of semantic auxiliary (subordination seems too strong a word). See section 243.2 for a discussion of the syntactic usage of this clitic.

242.442 The companion clitic to *-a* is *-ta*. Hallock (1959: pp. 6–7, 12) labels them as "final" and analyzes them as "a form which expresses a complete and final action" (1959: p. 6). Other analyses for Middle Elamite include Labat's (1959: p. 38, section 31) as a noun suffix *-t* followed by the enclitic *-a*; see section 233.32 for Achaemenid Elamite analyses. Grillot (1970: p. 217) analyzes *-t* as a completive aspect marker commonly followed by *-a* (or not, when it is *-t(i)*). This use of the completive aspect between two verbs can imply a past tense. There is some agreement that a completive aspect is probably marked by *-t(a)*, but the matter is open to some doubt.

242.443 The precativ *-ni* (*-li*, *-na*; OE *-li*; AE *-ni*) may be added to any verbal predicate to indicate a hortative wish 'may ____'. It is the only modal in the attested corpus, and in Middle Elamite is some-

times used for an imperative. See section 243.13 for the syntactic use of *-ni* and for examples.

242.45 The relationship to the Achaemenid Elamite verb morphology is rather obvious. The Achaemenid Elamite verb groups (Hallock's "conjugations") correspond as follows: I = Middle Elamite finite verb, II = Middle Elamite passive appellative, and III = Middle Elamite active appellative. Changes are the loss of the plural *-h-* and final *h* in Achaemenid Elamite, the simplification of clusters, *kp > p*, and the addition of the clitic *-ut* (see section 233.321) to the first person forms to reinforce the increasingly ambiguous forms. Other changes are *-unkə > -un*, which may be dialectal. In other words, the pattern which can be derived as underlying in Achaemenid Elamite is made quite explicit in Middle Elamite. To the best of our knowledge the use of the verb forms seems to be the same in Middle and Achaemenid Elamite. It is rare that verb usage can be sharply delimited in Middle Elamite.

242.5 Other Morphology

242.51 **Appellative bases.** A number of morphemes exist ambiguously divided between the nouns and verbals which occur with the appellative endings; note table 2.4, column A. These are handled here as appellative bases; Reiner (1969: pp. 85–86) called them "nominals of the second sub-class."

242.511 **Pronominals.** The appellative endings can be added to a number of general bases to give the equivalent of third person pronouns. The "indefinite" base *akka* 'who(ever)' can be so handled in Elamite. This base is actually the appellative *akka* 'who' (cf. *appa* 'what') in Elamite. These constructions are the origin of the Achaemenid Elamite pronouns *hupiri* and *akka(ri)*, etc.

242.512 **Numerals.** No numerals are attested in the classical Middle Elamite corpus due to the use of figures. The situation is assumed to be much the same as in Achaemenid Elamite; see section 233.41.

242.513 **Negatives.** The negative base is *in-*. This takes the appellative endings (column B) to give the negative forms: *inki* 'I not', *inri* 'he not', *inni/imme* (<**in* + *me*) 'it not', etc. Even in Middle Elamite, the neuter forms were being used with all persons and in Achaemenid Elamite *inni* became the normal form.

242.52 **Particles.** Indeclinables in Middle Elamite include the conjunction *āk* 'and, but', the vocative interjection *e* 'O', the prohibitive *ani* (see section 243.11 for use), the postpositions (see table 2.1), and

adverbs: *aha*, *ahar*, *ahan* 'there, here' and *meni* 'then'.

243 Middle Elamite Syntax

243.1 The basic word order in Middle Elamite is Subject-Object-Verb and all modifiers, including clauses, follow nouns. Adverbs precede verbs and clauses modifying a verb also precede it with the most remote coming first, i.e., the most closely attached clause immediately precedes the verb. As Grilhot (1973: pp. 149–150) summarizes the basic syntax,

Avant de poursuivre l'étude de cette hypothèse, il est nécessaire de rappeler quelques observations préalables:

dans un ensemble nominal, le mot principal est normalement placé en tête, et il est suivi des éléments secondaires qui complètent son sens,

dans une proposition, le groupe verbal est presque toujours placé en dernière position,

dans une phrase, la proposition exprimant la notion essentielle est généralement précédée des propositions secondaires (ou subordonnées) qui sont, assez régulièrement, suivies de la postposition *-a*.

Dans certains cas cependant, il peut y avoir, après le verbe principal, rejet soit d'une proposition dépendante, soit d'un complément déterminatif. Les propositions subordonnées sont, dans certains cas, introduites par les pronoms *akka* et *appa*, ayant fonction de pronoms relatifs, ou par des conjonctions. Les conjonctions sont surtout attestées dans les textes d'époque achéménide. De même que les pronoms relatifs, elles renforcent, en quelque sorte, la marque de dépendance de l'époque plus ancienne et précisent la qualité de la subordination.

243.11 Prohibitive constructions use the prohibitive particle *ani* followed by the verb in the active appellative (forms in *-n-*). The inflection for the verb is unusual in that the third person human ending (*-rə*) is not used, the third person neuter ending serving in its place. For all other persons, the normal appellative endings are used.

(3) A-NI UZ-ZU-UN (EKI.45.14)

may₂ [he] not₁ go₂

(4) d.IN-ŠU-ŠI-NA-AK NA-PÍR-Ú-RI A-NI UN HI-ŠA-AN-TI (EKI.45.11)

Inšušnak₁, my god₂, do not₃ abandon₅ me₄.

243.12 Precatives ('may ____') are commonly formed by adding the precative clitic *-ni* (*-li*, *-na*; cf. section 242.443) to the passive appellatives (forms in

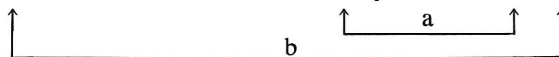
-k-). However, this clitic may also be added to the true verb.

(5) HA-AT d.GAL A-AK d.IN-ŠU-UŠ-NA-AK SI-IA-AN-KU-UK-PA RI-İK-KU-RI-IR TA-AK-NI/LI (EKI.9IIIc.VII)

May₇ the wrath₁ of Napiriša₂ and Inšušnak₄ of Siyankuk [the temple sanctuary ?]₅ be put₇ upon him₆.

243.13 Agreement between subject and verb is by number and person. It operates as indicated in table 2.4, i.e., noun endings in column A or B take the corresponding verb forms found in column E. In sentence 7 below, the pronoun *u* 'I' and the appellatives in *-k(ə)* take the verb in *-h*; *kuših* 'I built'. Similarly in 8, *sunki.p* 'kings' takes the third person plural verb *kušihš(ta)* 'they built'. See

(6) TA-AK-KI-ME f.d.NAH-HU-UN-TE-Ú-TÚ RU-TU₄ HA-NI-İK-Ú-RI-ME (EKI.41.III)



the life₁ of_b my (lit. of_a me₄) beloved₄ wife₃ Nahhunte-Utu₂

In example 6 *hani.k.u.ri.me* consists of the verb *hani* 'love', the passive *k*, first person *u*, the third person human appellative *-ri* in concord with *rutu* 'wife', and the neuter appellative *-me* in concord with *takkime*, which itself is formed by the related derivative *-me* (section 242.212). Such constructions are essential to Middle Elamite syntax.

It is worth examining this construction in greater detail. Possession and genitive constructions are normally indicated in Middle Elamite by concord with the column B appellative endings. Since these endings indicate number and person, possessive constructions in Middle Elamite commonly end up as long strings of nouns indicating person. When this is combined with the embedding type of marking in the foregoing paragraph, a syntactic device of great breadth and subtlety is created. However, the most striking feature remains the use of person in noun phrase concord, which can give dramatic alternation in form.

(7) Û v.ŠIL-HA-AK-d.IN-ŠU-ŠI-NA-AK ŠA-AK v.ŠU-UT-RU-UK-d.NAH-HU-UN-TE-GI-İK LI-BA-AK HA-NI-İK d.IN-ŠU-ŠI-NA-AK-GI-İK SU-UN-KI-İK h.AN-ZA-AN h.ŠU-ŠU-UN-KA₄ . . . A-AK SI-IA-AN d.IN-ŠU-ŠI-NA-AK NA-PÍR-Ú-RI-ME A-HA KU-ŠI-H (EKI.39.I/V)

I₁ [am] Šilhak-Inšušnak₂, son₃ of Šutruk-Nahhunte₄, beloved₆ servant₅ of Inšušnak₇, king₈ of Anshan₉ and Susa₁₀ . . . and₁₁ I built₁₆ there₁₅ temple₁₂ of my god₁₄ Inšušnak₁₃.

Reiner (1969: pp. 99–102) for a detailed discussion of concord in general.

243.2 **Appellative concord.** Appellatives play an extremely important role in the syntax of the noun phrase. Adjectival and possessive phrases and clauses are appellatives in Elamite. As such, they agree in person and number with their head noun, using the column B endings. This status as an appellative is carried by every nominal in the phrase or by the phrase as a whole. Thus, the concord can either be expressed on every nominal or only at the end of the phrase. In complex sentences, appellative concord can become quite elaborate and is the marker of sentence structure and embedding. The last word of the phrase will often recapitulate the possessive constructions of that phrase, using appellative endings in reverse order of appearance.

(8) A-AK SU-UN-KI-IP LI-KU-UP UR-PU-UP-PÁ SI-IA-AN KU-ŠI-İH-IŠ-TA (EKI.35.VIII)

and₁ the kings₂, the sovereigns₃ [who are] my predecessors₄ (lit. those who are earlier of me) built₆ the temple₅.

(9) v. HU-TE-LU-DU-UŠ-d.IN-ŠU-UŠ-NA-AK . . . ME-NI-IR HA-TÂM-TI-IR A-AK h.ŠU-ŠE-EN-RI SA-AK HA-NI-İK v.KU-TI-IR-d.NAH-HU-UN-TE-IR A-AK v.ŠIL-HA-AK-d.IN-SU-UŠ-NA-AK-RI . . . (EKI.60.I)

Hutelutuš-Inšušnak₁, prince₂ of Elam₃ and₄ Susa₅, beloved₇ son₆ of Kutir-Nahhunte₈ and₉ of Šilhak-Inšušnak₁₀ . . .

In the first part of example 7, all of the first person singular appellatives (*-k*, *-ka*) agreeing with *u* 'I' are in boldface. Similarly in 8, the appellative endings of *liku* and *urp* agree with the plural form *sunki.p*. In 9 we have a third person example in *-r, -ra*, largely parallel to 7. The repetition of the appellatives is compelling in its repetitiousness.

In embedding, this concord can pile up on the end of the phrase, and hence mark it.

(10) d.IN-ŠU-ŠI-NA-AK NA-PÍR-Ú-RI (EKI.20.III)

Inšušnak₁, my god₂

In example 10 we have simple concord of an appellative noun with its antecedent. It is literally, 'Inšušnak, he (who is of) me (the) god'.

(11) SI-IA-AN d.IN-ŠU-ŠI-NA-AK-ME (EKI.35.II)

the temple₁ of Inšušnak₂

In 11 we have the neuter equivalent with a literal translation of 'the temple, that (which is of) Inšušnak'. Thus, the modifying appellatives can be seen as appellative nouns in apposition, agreeing with their antecedents when they are combined into *siyan* (*Inšušnak napir.u.ri*).*me* (see example 7, part 2). The resulting appellative *napir.u.ri.me* is quite complex, but is only the result of a simple process repeatedly applied. Thus, Middle Elamite syntax, like Middle Elamite morphology, uses a few simple but powerful devices to handle its grammar. The appellative is absolutely preeminent in Middle Elamite grammar.

243.3 Grillot (1973) has argued vigorously that the final vowels *i* and *a* in Elamite are not dummies, but important syntactic markers. Basically, she argues that *-a* marks subordination, whether of clauses, phrases, or words, and is the explanation of the "connective *-a*" in Achaemenid Elamite. The vowel *-i*, she argues, has the force, at least sometimes, of an end of clause marker (1973: pp. 143–145). This argument, while relatively subtle and uncertain, has parallels in other languages.²⁰

Note that this vowel alternation (including its possible absence) has been indicated by a schwa (ə) in the Elamite transcriptions in this work. The schwa implies that forms with *-a*, with *-i*, or with no vowel are attested or expected.

III. PHONOLOGICAL CORRESPONDENCES AND DEVELOPMENTS

310.0 The phonological correspondences between Elamite and Proto-Dravidian are very regular indeed. Except for some glides and liquids (PED **h*, **w*, **r*, **i*) which are poorly attested, they are straightforward. The following correspondence rules are based primarily on the lexical etyma in section 422. They focus on the initial (C)VC, but are not necessarily restricted to that syllable. Where relevant, the grammatical morphemes in chapter V are used to illustrate other environments. The primary reason for this constraint is the unreliability of Proto-Dravidian reconstructions beyond the first syllable; see section 120.0. The etyma in appendix II are also discussed, particularly the phonological problems in group B.

310.1 The alphabetical order of the rules and the

lexical entries in section 422 and appendix II is as follows: *a, i, u, e, o, ə, h, w, k, c, š, t, n, p, m, r, l, v, r, l, t*. This is a slight variation on the normal order used for Proto-Dravidian, which is based on the Tamil alphabet. That script, following South Asian norms, uses essentially the same order as Sanskrit. The major changes are the addition of **ə* after the vowels, the insertion of **h* and **w* in place of *k* (*āytam*), and the addition of **š* between *c* and *t*.

310.2 The correspondences are given in the following format: $A > B : C / X$, where *A* is the PED phoneme, *B* is the Proto-Elamite phoneme, *C* is the Proto-Dravidian phoneme, and *X* is the PED environment. Asterisks have been omitted since they are redundant here, i.e., all forms would have them. Normal linguistic conventions are used to indicate the environment (slash and dash), unattested forms (asterisk), parallel rules (square brackets), and coordinated rules (braces). Of the operators, $>$ is used for diachronic change, \rightarrow is used for synchronic grammatical change, $:$ indicates that a correlation exists without implying causality, and $(>)$ says that the rule is a diachronic tendency and that there are exceptions. The symbol $\#$ is used for word boundaries and space ($\#$ — means initially, — $\#$ means finally) and $+$ is used for the morpheme boundary in the phonological rules; a hyphen, $-$, is used for the same thing in the lexical statements.

Lexical citations using only numerals refer to section 422. Those with a single letter and numeral refer to appendix II, while numerals following the section sign, §, refer to forms that can be found in the section with that number. These rules and citations for lexical evidence are summarized in table 3.1. Additional relevant rules for Elamite (symbolized by El. plus a number) and for Dravidian (symbolized by Dr. plus a number) are summarized in tables 3.2 and 3.3 respectively. Rules with lettered variants (such as 9a) are sporadic and require comment. They may not be strictly ordered in their application. Unlettered rules are internally ordered.

311 Vowels and Semivowels

311.1 PED **a*, **i*, **u*. For the three most basic vowels, PED **a*, **i*, **u*, there are no complications. They are incredibly straightforward.

- $$\left. \begin{array}{l} (1) a > a : a \\ (2) i > i : i \\ (3) u > u : u \end{array} \right\} / \left\{ \begin{array}{l} \# _ C \\ \# C _ (C) \\ \# VC _ (C) \end{array} \right.$$

Even the variation introduced below the levels of Proto-Dravidian and Proto-Elamite have little impact;

²⁰ One is colloquial Tamil, where for forms such as the masculine honorific in *-ar*, the nominative has a final *-u* [u] while the oblique does not. Since this vowel can be further added or lost in phonology and stylistics, it is often an ephemeral contrast. However, for some cases it is crucial: *avaru appa* 'he₁ [is a] father₂', vs. *avar appa* 'his₁ father₂'.

TABLE 3.1 The Phonological Correspondences and their Citations

Rule No.	Correspondences PED > PEI : PDr/PED environment	Citations by General Environment*			Further Developments and Comments		
		# —	#C—(C)	(V)C—(C) and others	Elamite	Dravidian	General
1.	a > a : a	1; A1-3, B1-3, C1-2	14-17, 23-25, 29-32, 42-48, 52, 61-62, 65-69, 77-78; A6, C11, C18-19	4, 6, 12, 35, 73, 80; A1-2, B1-2, B5, C1	Note rule El.1c.		
2.	i > $\begin{cases} i : i \\ \emptyset : y/\#—V \\ y : y/V—\# \end{cases}$	2-4; C3b	18-19, 26, 33-36, 49, 63, 70, 74, 80; A4, B6, C8, C16, C20		See rule El.2.		
2a.		A6		§511	PEI *ay > e; see rule El.3.		= *i
3.	u > u : u	5-9	20, 27, 37, 50, 54-55, 71, 75-76, 81; A5, B8, C4-6, C10	54; B3	Note rule El.5.		
4.	e > $\begin{cases} e : e \\ e : a \end{cases}$	10-11	21, 38, 51, 55, 72; B7, C3, C7, C9, C12-13, C17	11, 27	e > i is common; see rule El.6.	*e > i/VC—; see rules Dr.1 and Dr.2.	
4a.			56, 73	C3b			phonologically conditioned?
5.	o > $\begin{cases} a : o/\#k—\{l, l\} \\ u : o \end{cases}$	12-13	B4-5 22, 28, 39-41, 57-60, 64, 74; C14-15			*o > u/VC—; see rules Dr.1 and Dr.2.	Note rule 9a.
6.	a > a, i, u : a/C—#			13, 25, 75; B1			commonly added by rule
		#—V	V—V, V—#	V—C, C—V			
7.	h > $\begin{cases} h : \emptyset/\#— \\ h : H \end{cases}$	14-22; A4, C4-5 A5?	12, 30, 57-58; A3-6, C11	75	See rule El.7b. PEI *h > \emptyset/—k; see rule El.7a.	See rule Dr.8.	
8.	w > w(?) : v	C3a			written HU, ū	related form with k; see C3.	doubtful
9.	k > $\begin{cases} k : k \\ h : k/\begin{cases} \#—o\{l, l\} \\ \#a—V \end{cases} \end{cases}$	23-28; C3c, C6-7	5, 34, 39-40, 42-43, 53, 71, 80a; C3b; §522.2	36, 55, 64; C17		See rule Dr.4.	
9a.		B4-5					Note rule 4a. Possibly *x(?)
10.	c > c : c	29-41; C8-9		3	PEI *c > s,z; see rule El.4.	Complex changes; see rule Dr.5.	

N.B.: Citations with numbers only refer to section 422; those with letters and numbers refer to appendix II. Numbers following § refer to those sections in the text.

see section 311.4. Attestations are numerous and evenly spread; see table 3.1.

311.11 PED **i*. The vowel **i* seems to have a non-vocalic variant (*i̇*, *y*) when in a cluster with another vowel.

$$(2a) \quad i̇ > \begin{cases} \emptyset : y/\#—V \\ y : y/V—\# \end{cases}$$

In Proto-Elamite the initial semivowel is always lost and final **ay* becomes *e*; see rule El.3, table 3.2. Thus, there remain no direct reflexes in Elamite. In Proto-Dravidian initial **y*- is possible only before **ā*; even there it is unstable and otherwise is always lost. It is probably significant that in both Dravidian and Elamite *y* is rare and attested initially only before *a*; cf. sections 121.31(4) and 232.2. The attestations are re-

stricted. However, it patterns well and consistently and is almost certainly cognate.

311.2 PED **e*, **o*. The fate of the two remaining primary vowels, PED **e* and **o*, is considerably more intricate. Both Elamite and Dravidian tend to replace them with the basic vowels *a*, *i*, *u*. For PED **o* this becomes absolute in Elamite since no *o* is attested in the script. The shift of PED **e* to PEI **e* to *i* is common and increasingly so through time; note rule El.6.

In Proto-Dravidian these two vowels remain only in the initial (presumably stressed) syllable, otherwise PDr **o* goes to *u* and PDr **e* to *i*. This can be further and absolutely confused by vowel metaphony; see rules Dr.1 and Dr.2 along with sections 311.411 and 311.412. Furthermore, both of these protovowels sporadically are attested as *a*. For PED **o* this seems

TABLE 3.1 (Continued)

Rule No.	Correspondences	Citations by General Environment			Further Developments and Comments		
	PED > PEI : PDr/PED environment	#—V	V—V, V—#	V—C, C—V	Elamite	Dravidian	General
11.	$\xi > \begin{cases} \xi : t/\# \text{—} V\{\underline{r}, l, \underline{t}\} \\ \xi : \{t, \emptyset\}/\# \text{—} V\# \\ \xi : \emptyset/\begin{cases} \# \text{—} VC \\ \\ V\text{—}C \\ \xi : y/\begin{cases} V\text{—}V \\ V\text{—}\# \end{cases} \end{cases} \end{cases}$	45–48, 50–51 B8 42–44, 49		64 14, 79; C19 1, 4, 21, 72; C1; §514, 552.1		compensatory vowel length- ening *št > t (?); see (64).	
12.	t > t : t̥		2, 15, 18, 22–23, 28, 70; B1, C6–7, C12, C16, C20	75			
13.	t > t : t	52–60; C10	12, 19, 27, 74, 80b; A1; §513	20			
14.	$n > \begin{cases} n : n/\# \text{—} V \\ n : \{\underline{n}, n\}/V\text{—} V \\ n : \underline{n} \begin{cases} \#(C)V\text{—} + C \\ \text{—}\# \end{cases} \\ n : N/\#(C)V\text{—} C \\ \emptyset : N/V\ldots V\text{—} C \end{cases}$	61–64; C11	10, 16, 35, 49; C4 §522.1, 522.32	13, 59 3, 36, 55 §515, 554.2		See rule Dr.7.	
15.	p > p : p	65–74; C12–15	6, 17, 24, 56; C8; §521.2			PDr *-p- > -v-, see rule Dr.6.	
16.	$m > \begin{cases} m : m/\{\#\, +\}\text{—} V \\ \quad \#(C)V\text{—}(\#) \\ \{n, m\} : N/\text{—}\# \\ \emptyset : (N)/\text{—} C \end{cases}$	75–76; C16–17	§511, 551.1 7; A2; §521.1 31; B7; §512, 554.1	61	graphically <i>m</i> = <i>v</i>	See rule Dr.7.	also <i>N</i> to rule 14?
17.	r > r : r		11, 25, 32, 44, 65–67, 78, 81; C10, C14		PEI * <i>r</i> = ME <i>r</i> , AE <i>rr</i> (El.8.)		
18.	l > l : l		38, 41, 45, 80; B2, B4, C2–3, C9, C15	C17			
19.	v > m : v	77–81; B6–7, C18–20		B5	graphically <i>v</i> = <i>m</i> ; note rule El.1b.		
20a. 20b.	$\underline{r} > \begin{cases} r : z \\ l : z \end{cases}$		46 47; B3				
21.	l > l : l		8, 20, 52, 60, 62; B6, C3	20; B5	PEI * <i>l</i> = <i>ll</i> , EL; see rule El.8.		
22.	$\underline{t} > \begin{cases} \underline{r} : \underline{r}/(V)\text{—} V \\ \\ t : \underline{r}/V\text{—}\# \end{cases}$		4, 9, 26, 48, 50–51, 54, 64, 68–69, 73; C1, C5, C18, 6, 26	13	PEI * <i>r</i> = ME <i>r</i> , AE <i>r</i> (El.8.)		PED * <i>t</i> > <i>t/n</i> —

N.B.: Citations with numbers refer to section 422; those with letters and numbers refer to appendix II. Numbers following § refer to those sections in the text.

to be environmentally conditioned and is so handled. For PED *e both cases (56, 73) involve a *p with another stop (the example in appendix II, C3b, is due to Dravidian vowel metaphony). This is possibly an environmentally conditioned sporadic change, but it has been handled as a sporadic shift in rule 4a.

- (4) e > $\begin{cases} e : e \\ e : a \end{cases}$
 (4a) $\begin{cases} e : e \\ e : a \end{cases}$
 (5) o > $\begin{cases} a : o / \# k \text{---} \{l, \emptyset\} \\ u : o \end{cases}$

311.3 The neutral vowel. I have tentatively recon-

structed a neutral final vowel (*ə) for PED. It is best attested by the Proto-Dravidian neutral vowel (*ə) which exists primarily to prevent obstruents from being word final. It commonly falls together with PDr *u, succumbs to vowel harmony (cf. Telugu), or disappears entirely. It regularly survives only in Tamil, Kodagu, and some dialects of Kannada as [u] and in Malayalam as [ə̃]. Besides the possible grammatical uses of variants in graphic a and i (see Grillo, 1973: pp. 143–145 and section 243.3), numerous cases exist in Elamite of free or nearly free variation of a consonant and a consonant with a, i, or u; see section 231.4. This is also handled as a final neutral vowel; see section 121.21. One should note that there is no guarantee

TABLE 3.2

Phonological Changes in Elamite

No.	Rules	Citations	Comments
E1.1a	PE1 V > ∅ / #_{t,t,n}(+)a	2,10,12, § 541.22	Apheresis, see § 311.42.
b	PE1 *vi > ∅ / #_1V	80A,80B,B6	
c	PE1 *a > ∅ / #_hV (h < PED *k)	B1-3	See rule 9a.
E1.2	PE1 *i (>) ME u	3,19,34,63	
E1.3	PE1 *ay > e	§ 511	
E1.4	PE1 *c > ME {s,z} : AE s / _a	3,29-32	Counterexamples: ME <u>z</u> (31)
	ME {s,z} : AE z / _{i,e}	33-38;C8-9	ME <u>z</u> (C9)
	ME {z,s} / _u	39-41	ME <u>s</u> (40)
E1.5	ME <u>u</u> : AE <u>i</u>	19,27,37,39, 54,71	
E1.6	e (>) i	11,38,55; C12-13	Note § 511.
E1.7a	PE1 *h > ∅ / _k	A6	
b	ME h > AE ∅	14,17-21,75; AE <u>h</u> graphic only A4-5,B2	
E1.8	Spelling Rules	passim	
	PE1 *l = ME,AE <u>ll</u> , <u>e</u> <u>l</u>		
	PE1 *r = ME <u>r</u> , AE <u>rr</u>		
	PE1 *t = ME <u>r</u> , AE <u>r</u>		

TABLE 3.3

Major Phonological Changes in Dravidian

No.	Rules	Citations
Dr.1	Any bisyllabic stem must conform to: ${}^1C_0^1 \quad {}^1V_1^1 \quad {}^2C_1^1 \quad {}^2V_1^1 \quad {}^3C_0^2 \quad (\text{note table 1.2})$	11,24,27,36,55, see § 311.411.
Dr.2	$\text{PDr } \begin{bmatrix} *i \\ *u \end{bmatrix} > \text{PSDr } \begin{bmatrix} *e \\ *o \end{bmatrix} > \begin{matrix} \text{Ta,} \\ \text{Ma} \end{matrix} \begin{bmatrix} i \\ u \end{bmatrix} : \begin{matrix} \text{CTa,} \\ \text{CMa} \end{matrix} \begin{bmatrix} e \\ o \end{bmatrix} / \#(C)_Ca$	4,12,58;C7, see § 311.412
Dr.3	$*(C)VT+V > *(C)TV+V > (C)T\bar{V}$ (T = any apical)	15,21,44;C20, see § 311.413.
Dr.4a	PDr *k > TaMa,Te c / #_{i,e}C, C ≠ retroflex	26, see § 313.31.
b	PDr *k > PKxMt q / #_V, V ≠ ĩ (PKxMt *q > Kur x)	24;B5,C6
c	PDr *k > Br x / #_V, V ≠ ĩ	B4
Dr.5a	PDr *c (>) TaMa,Te Ø / #_	31,33,40, see § 313.32.
b	PDr *c (>) Tulu t / #_ (also in Toda)	36
c	$\text{PDr } *c > \begin{cases} \text{CDr } c(>s>h>\emptyset) / \#_ \\ \text{CDr } c(>s>y>\emptyset) / \#_ \end{cases}$	29,30,32-34,37;C9 72,76
d	PDr *c > NDr k / #_ĩ (?)	30 (?)
Dr.6	PDr *p > v / V_V	24
Dr.7	$\text{PDr } *N > \begin{cases} N_\alpha / _C_\alpha \\ \{n,m\} / _\# \end{cases} \quad (\text{contrasts with } n)$	3,36,55,61, see § 314.0. 31;B7
Dr.8	$\text{PDr } *H > \begin{cases} v(v) / \#(C)V_+V \\ \{v,k\} / V_V \\ \underline{k} / V_+t \quad (\underline{k} = \text{āyṭam, only in Tamil}) \\ C_\alpha / V_+C_\alpha \\ v / _\# \\ \emptyset \end{cases}$	A3-6 12,30,58;A3-6,C11 A3-6 30,A3-6 A3-6 (normal development)

that the Dravidian and Elamite neutral vowels are connected. However, since the neutral vowels pattern so similarly and the phonologies are so close in other points, this is the hypothesis here. It can be reconstructed for four etyma (13, 25, 75; B1).

311.4 Post-PED Developments

311.41 Dravidian developments. On the whole, the system of vowels found in PED is directly maintained in Proto-Dravidian and in most Dravidian languages. The changes and problems are generally the result of shifts in the overall structure of the stem or word. Some of these have impacted greatly on the vowels of specific etyma; see the discussion in section 122.1. Thus, we are looking at the set of changes (the morphophonemics) which led to vowel loss and fusion as well as the introduction (manifestation ?) of contrastive vowel length.

311.411 Stem shaping. As discussed for Dravidian in section 122, the root in a derived stem always has a short vowel and single second consonant. This is the case no matter what variations in vowel length and consonant clusters a root may have inherently had (or developed). In other words, a basic derived stem always has the following form (see table 1.2):

(Dr.1) Any bisyllabic noncompounded stem must conform to: ${}^1C_0 {}^1V_1 {}^2C_1 {}^2V_1 {}^3C_0$.

The root vowel, the first short vowel (1V_1), may be any vowel (*a, i, u, e, o*). The vowel of the augment, the second short vowel (2V_1), may only be *a, i*, or *u*. Whatever its origin, a bisyllabic stem will be made to fit this pattern. First syllable vowels will be shortened (see section 122.11), second syllable **e* and **o* will be changed to *i* and *u* respectively (or to *a*?). A medial (i.e., root final) consonant cluster will be simplified to the homorganic single stop; see sections 122.15 and 422: 55. Furthermore, if consonantal syncope and resulting vowel fusion occur (see section 122.15 and table 1.2), any direct attestation of the PED vowel may be lost; see Zvelebil (1970: p. 75 [table 3]) for a detailed summary of syncope.

311.412 Metaphony. As applied in Dravidian linguistics, the term metaphony is used to describe a lowering of vowels in Southern Dravidian (SDr. and Te.). The vowels **i* and **u* change to *e* and *o* when **a* occurs in the next syllable after a single consonant, i.e., when 1V_1 is **i* or **u* and 2V_1 is **a* in the stem. This is considerably complicated by Tamil-Malayalam's reversing the process and taking **e* and **o* (including PDr **e* and **o*) to *i* and *u* in the same environment; see Andronov (1977b: pp. 222–223) for reasons for this shift. Colloquial Tamil and Malayalam, in turn, have

only *e* and *o* in this environment. Thus, PDr **i* and **e* fall together as do PDr **u* and **o* in the environment before *Ca*. In Kannada, Telugu, Colloquial Tamil, and Colloquial Malayalam, this merger is manifested as *e* and *o* respectively, while in Literary Tamil and Malayalam it appears as *i* and *u*. See Krishnamurti (1958a), Bright (1966), and Zvelebil (1970: pp. 65–70, 74) for discussion and details. Usually the original vowel can be recovered from related forms in other environments, but sometimes it cannot and remains ambiguous. In these cases I use a grave accent over *i* and *u* to indicate the ambiguous reconstruction: $*\grave{i} = \{*i, *e\}$, $*\grave{u} = \{*u, *o\}$.

$$\begin{aligned} \text{(Dr.2)} \quad \text{PDr} \begin{bmatrix} *i \\ *u \end{bmatrix} &> \text{PSDr} \begin{bmatrix} *e \\ *o \end{bmatrix} > \\ &+ \text{Te.} \begin{bmatrix} *e \\ *o \end{bmatrix} > \\ &\text{TaMa} \begin{bmatrix} i \\ u \end{bmatrix} : \text{CTa.} \begin{bmatrix} e \\ o \end{bmatrix} / \#(C) \text{—} Ca \\ &\text{CMa} \begin{bmatrix} o \\ o \end{bmatrix} \end{aligned}$$

311.413 Metathesis. Strictly speaking, metathesis (also called apical displacement) is a phenomenon of the Telugu-Kui branch of Dravidian.¹ However, it is discussed here since it tends to obscure phonological correspondences. In brief, it describes a process (or set of processes) by which an initial sequence was reordered:

$$\text{(Dr.3)} \quad *(C)VT + V > *(C)TV + V > (C)T\grave{V}$$

(T = any apical)

While it is by no means certain that metathesis is the mechanism that caused this change, it is an efficient model to explain the relationship between underlying and attested forms. Examples from Telugu include: *lē* (<*ila-) 'is not', *nāN* (<an-aN) 'to say', *nā* (<*ena) genitive of *nēnu* 'I', *dāni* (<*adāni) genitive of *adi* 'that-nonmale', *dīni* (<*idāni) genitive of *idi* 'this-nonmale'. This pattern in the pronouns is further extended to some nonapicals: *vāḍu* (<*avaṇṇu) 'that-he', *vīḍu* (<*ivaṇṇu) 'this-he'. Lexical examples from Kui (some with secondary shortening) include: *tlau*, pl. *tlāka* (<*talay) 'head', *mrahnu* (<*mrānu < *maram) 'tree', and *srāsu* (<*sarasu) 'snake'. However, in no language is the change universal or even well delimited. Krishnamurti (1978) makes it clear that only a small part of the change can be inherited and that most of it is due to areal change and analogy; see also Krishnamurti (1961) and Zvelebil (1970: pp. 164–167).

¹ Note that this phenomenon has spread to neighboring languages. The Brahmin Tamil dialect of Madras city has changed *enakku* 'to me' to *nēkku* and *onakku* 'to you' to *nōkku*.

² Personal communication from Warren Swidler, who speaks Brahui and found Bray unreliable on this point. However, given the varied nature of Brahui /h/, Bray's records may only reflect different dialects, styles, and speakers. See Bray (1909: p. 29).

312.1 A speculative reconstruction is PED **w*. It can be used only for one doubtful etymon **wel* (appendix II, C3a), where Middle Elamite has written both HU and IK. Dravidian has forms in both *k*- and *v*- for this entry. This may be a special case of PED **h* or pure chance. At the moment PED **w* serves to mark an anomaly. It is conceivable that like **i* (**y*), it is a nonvocalic *u* and hence a true [w]. Again like **i*, it is rare.

(8) *w* > *w* (?) : *v*

313 Obstruents

313.0 The reflexes of most PED obstruents are straightforward, although they can become more involved in their Elamite and Dravidian attestations.

(9) *k* > *k* : *k*

(10) *c* > *c* : *c*

(12) *t* > *t* : *t*

(13) *t* > *t* : *t*

(15) *p* > *p* : *p*

As is becoming obvious, the phonology of PED is very similar to that of Proto-Dravidian.³ Specifically, when PED **t* (rule 22) is added in, there is the complete six stop system where the stops contrast by position, a pattern characteristic of Dravidian. Many of the same restrictions, such as no initial apicals, also apply. There is no contrastive voicing. Due to a lack of clear attestation in Elamite, it is not certain if there was any contrast in tenseness, length, or gemination. It has been omitted as a consideration in this work since the question is undecidable for the present.

313.1 PED **š*. The major variance from the Proto-Dravidian model found in the phonology of PED is the fricative *š*. Its reflexes in Dravidian are quite complex due to its being entirely lost, but often with compensatory vowel lengthening. This may be one of the origins of vowel length in Proto-Dravidian.

Initially before an apical (alveolar ?) liquid PED **š* becomes PDr **t*; note the similar shift of PDr **c* to *t* in rule Dr.5b, table 3.3. When initial, but followed by some other consonants, *š* is lost, but the adjacent vowel is invariably long; see table 3.1. An anomalous case is presented by PED **šū* where the conditioning consonant is missing and Dravidian attests both forms: PDr **tū* and **ū*; see appendix II, B8.⁴ Inter-

vocalically and finally, Proto-Dravidian consistently attests **y*. This origin of PDr **y* helps explain its anomalous distribution, being very common finally but rare initially, while PDr **v* (*=*w*?) is common initially but nonexistent finally (*-v* is attested only as a rare reflex of PDr **H*; see rule Dr.8, table 3.3). Elamite always attests *š*.

$$(11) \quad \begin{cases} \text{š} : t/\# _ V\{l, r, t\} \\ \text{š} : \{t, \emptyset\}/\# _ V\# \\ \text{š} : \emptyset / \begin{cases} \# _ VC \\ V _ C \end{cases} \\ \text{š} : y / \begin{cases} V _ V \\ V _ \# \end{cases} \end{cases}$$

313.2 In two specific environments PED **k* has the reflex *h* instead of *k* in Elamite. While the anomaly is phonologically delimitable, it seems poorly motivated. At present, it is being handled as a variant of PED **k*, but it may be a separate phoneme (PED **x*?). It may be relevant that in one reduced form Brahui also attests *h*- for one of these forms; see appendix II, B5. All of the attestations have been gathered in group B. These data overlap with rule El.1c; see section 311.42.

$$(9a) \quad k > h : k / \begin{cases} \# _ o\{l, l\} \\ \# a _ V \end{cases}$$

313.3 Post-PED Developments

313.31 PED **k*. Except for the foregoing (rule 9a), PEI **k* remains *k* throughout. However, PDr **k* undergoes substantial changes in the various branches of Dravidian. In the palatalizing group of southern Dravidian languages (Tamil-Malayalam and Telugu, but not Kannada, Kodugu, or Tulu), generally **k* becomes *c* [tʃ] before a front vowel followed by a single non-retroflex consonant. There are specialized exceptions (see Annamalai, 1968), and also loans to and from Kannada confuse the issue, but the rule is a reliable one; see rule Dr.4a, table 3.3.

In Proto-Kurux-Malto PDr **k* became *q* before all vowels except *i*. Later PKxMt **q* became *x* in Kurux, and Malto developed a voicing contrast between *q* and *G*; see rule Dr.4b. Independently in Brahui PDr **k* went to *x* except before *i*; see rule Dr.4c. It was previously thought that Brahui and Kurux-Malto were closely related, due to this innovation's being shared; cf. Burrow (1943: pp. 122–139). However, recent work by Das (1973: pp. 10–37) has made it clear that Malto has a true uvular stop [q] as its normal reflex of PDr **k*. Since *q* > *x* is normal and *x* > *q* is not, and

³ This result has been something of a personal disappointment. One of my primary reasons for undertaking the search for languages cognate with Dravidian was to find information on just how the phonology of Proto-Dravidian came into existence. Now this problem has been pushed back one more stage but is no closer to solution.

⁴ Evidence from PDr **tūḡkə*, **ūḡkə* (DED 2777(a) and 629) both meaning 'swing' implies that this alternation may also apply before velars; see appendix II, B8.

since Kurux and Malto are closely related, the *x*'s of Kurux and Brahui are not a shared sound shift, but rather, two independent shifts in the same environment. Thus, the primary reason for the grouping of North Dravidian has been removed. Other points in common seem to be shared retentions; see section 112.

- (Dr.4 a) PDr **k* > TaMa,Te *c*/# — {*i*,*ē*}*C*, *C* ≠ retroflex
 (b) PDr **k* > PKxMt *q*/(#)—*V*, *V* ≠ *i*
 (c) PDr **k* > Br *x*/#—*V*, *V* ≠ *i*

312.32 **Ped **c***. While PED **c* has identical reflexes in both their protostages, both Elamite and Dravidian show considerable changes. In Elamite PEI **c* is manifest in the script as *s* and *z*. The phonetic nature of the graphic unit *z* is not certain, but Old Persian loans make *c* [tʃ] the most likely possibility at least for the Achaemenid period. In any case, due to loanwords, Middle Elamite developed a weak contrast between *s* and *z*. PEI **c*'s reflexes are elaborately distributed, conditioned by the following vowel and period of citation. Before *a*, PEI **c* usually becomes *s* and rarely *z* in Middle Elamite, while in Achaemenid Elamite **c* always goes to *s*. Before front vowels in Middle Elamite, the same pattern is found, but in Achaemenid Elamite **c* is always attested as *z*. Before *u*, Middle Elamite reverses its pattern with PEI **c* usually becoming *z* and rarely *s*; see table 3.2.

- (El.4) PEI **c* > $\begin{cases} \text{ME}\{s,z\}: \text{AE } s / _a \\ \text{ME}\{s,z\}: \text{AE } z / _ \{i,e\} \\ \text{ME}\{z,s\} / _ / _ u \end{cases}$

In Dravidian, PDr **c* tends to drop out altogether. In the palatalizing southern Dravidian languages (Tamil, Telugu, and Malayalam) initial **c* is lost sporadically, while occasionally in Toda and commonly in Tulu, initial **c* becomes *t*. Areally in Central Dravidian initial **c* > *c* > *s* > *h* > \emptyset . The whole progression can be seen in adjacent dialects. Commonly in Central Dravidian and less often in South Dravidian, intervocalic *c* > *s* > *y* > \emptyset . In a few words in Brahui and Kurux-Malto, initial **c* became *k* before *ū*. See Zvelebil, 1970: p. 106 for discussion and examples. This North Dravidian shift to *k* is restricted to a very few words. All of these changes tend to be sporadic and areal rather than genetic. Except to confuse the data, they have little diachronic significance.

- (Dr.5 a) PDr **c* (>) TaMa,Te \emptyset /#—
 (b) PDr **c* (>) Tulu *t*/#— (sporadic in Toda)
 (c) PDr **c* > $\begin{cases} \text{CDr } c(>s > h > \emptyset)/\#— \\ \text{CDr } c(>s > y > \emptyset)/V_V \\ \text{(sporadic in SDr.)} \end{cases}$

- (d) PDr **c* (>) NDr *k*/#—*ū* (?)

313.33 **PED **t* and **ṭ***. Except that Elamite does not indicate **t* and thus, all discussion of contrasts and distribution is thrown on Dravidian, there is no major problem or irregularity. Both Elamite and Proto-Dravidian regularly attest these protophonemes, as do most Dravidian languages.

313.34 **PED **p***. In Proto-Dravidian, intervocalic lax **p*- always goes to *-v-*. The rare counterexample always seems to be due to analogy or hypercorrection; see section 121.31(1). I have maintained PDr **-p-* and **-v-* as separate, since not all examples of **-v-* can be traced to a labial. However, it should be kept in mind that they cannot contrast in Proto-Dravidian.

- (Dr.6) PDr **p* > *v*/*V*—*V*

314 Nasals and PED **v*

314.0 The reflexes of PED **n* and **m* are neither simple nor direct. Furthermore, complexities introduced in Elamite and Dravidian often confuse the issue; for example, PED **v* patterns with the nasals. It is not certain if the final solution has been achieved with these data. A good deal of the confusion is built into the sources.

Elamite script does not contrast [m] and [v]; what is transcribed as *m* could just as well be handled as *v*. Vowel nasalization and nasal loss in unstressed clusters are almost certain; see section 231.4. Thus, all consistent indication of nasals in Elamite is thrown on the letter *n*. It is not clear what the underlying system might have been.

Dravidian attests nasals in a complex, asymmetrical, even skewed pattern. The details are well known, but this does not necessarily make for complete understanding. Proto-Dravidian contrasts three nasals (**m*, **n*, **ṇ*) along with a possible fourth (**ṇ̄*). However, they are intricately distributed, especially **n* which has dental (*n*) and alveolar (*ṇ*) variants which may be partially in contrast; they have been kept distinct for discussion. Also, all obstruents can be preceded by their homorganic nasal, which will be symbolized as **N*.

Two nasals, *m* and dental *n* (along with palatal *ṇ̄*), contrast initially. Three nasals, *m*, alveolar *ṇ*, and some cases of retroflex *ṇ̄*, contrast finally. The same three also contrast intervocalically. Dental *n* has a few citations in final and intervocalic positions, but as variants of **m*, not **n*. Thus, dental *n* initially contrasts with *m* and patterns with alveolar *ṇ*. Finally and intervocalically however, dental *n* seems to do just the opposite and patterns (as a stylistic variant) with *m* while contrasting with alveolar *ṇ*. A possible provi-

sional solution is to have the three clearly contrasting Proto-Dravidian phonemes, **m*, denti-alveolar **n*, and retroflex **ṇ*, along with an archiphoneme **N*. This **N* will handle homorganic clusters and final (also some intervocalic?) *m/n* alternations; see table 3.3, rule Dr.7. See also Subramoniam (1968) and Shanmugam (1972) for discussion and differing views on the solution.

$$(Dr.7) \text{ PDr } *N > \begin{cases} N_{\alpha}/_C_{\alpha} \\ \{n,m\}/_ \# \text{ (contrast with } \underline{n}) \end{cases}$$

We must reconstruct at least two nasal phonemes for PED. It is possible that there could be more. There is no clear etymon with PDr **ṇ* as its sole reflex in the corpus. While PDr **ṇ* appears several times, it is always as a variant of alveolar *n*, even in the Dravidian citations. Such variation is not unusual and is one of the phenomena which make Dravidian nasals so confusing.

314.1 PED **n*. PED **n* has been taken as the general nasal. In Proto-Dravidian this general status would more likely be given to PDr **m* (or **N*). Thus, in some cases, alternation between *n* and *m* will be due only to their differing usages as cover symbols. Where attested, PED **n* is always found as *n* in Elamite, although there may be examples of sporadic, conditioned sound shifts (*n > m*—*p*, etc.). In Proto-Dravidian it is dental *n* initially and alveolar *n* finally and before stops in grammatical clusters, i.e., where a morpheme boundary (+) is involved. Intervocally it has a varied attestation as both alveolar *n* and retroflex *ṇ*, with both variants found in most etyma; see table 3.1. Note that in one case (section 422: 13) where there is a cluster of PED **n* + **t*, the **t* assimilates to **ṭ* (Elamite *r*), indicating that the nasal was an alveolar in this position in PED. Before consonants PED **n* is attested as the homorganic nasal (*N*) in Proto-Dravidian; see rule Dr.7, table 3.3. After the first syllable and particularly in grammatical endings, Elamite loses the nasal in such clusters.

$$(14) \text{ } n > \begin{cases} n : n/_ _ V \\ n : \{n, \underline{n}\}/V_ _ V \\ n : \underline{n}/\begin{cases} \#(C)V_ _ + C \\ _ _ \# \end{cases} \\ n : N/\#(C)V_ _ C \\ \emptyset : N/V \dots V_ _ C \end{cases}$$

314.2 PED **m*. The reflexes of PED **m* are clear only in the first syllable. After that Elamite and Dravidian attest both *n* and *m* finally; *n* more commonly

in Elamite, *m* more commonly in Dravidian (symbolized as PDr **N*). This is really no different from the situation in Dravidian where the common formative PDr **-aN* (section 131.12) is attested in both *m* and *n* (but never in alveolar *n*); note rule Dr.7, table 3.3. PED **m* has also been used to indicate a nasal in a cluster which is not attested in Elamite and is variably so in Dravidian; see section 422: 61.

$$(16) \text{ } m > \begin{cases} m : m/\begin{cases} \{ \#, + \} _ _ V \\ \#(C)V_ _ (\#) \end{cases} \\ \{n,m\} : N/_ _ \# \\ \emptyset : (N)/_ _ C \end{cases}$$

314.3 PED **v*. The reflexes of PED **v* are considerably complicated by the fact that not only does Elamite script not distinguish between [m] and [v], but also that the actual nature of the graphical unit *m* is unknown; see section 232.2. Thus, the distinction depends solely on Dravidian sources. Proto-Dravidian contrasts initial **m*- and **v*-, but not consistently. There are numerous doublets that contrast only slightly in meaning if at all; see section 121.31(2). The original situation is open to some doubt. Two groups of Dravidian languages (Kannada, Kodagu, Tulu; and Kurux, Malto, and Brahui) shift initial **v*- to *b*.

$$(19) \text{ } v > m : v$$

315 Liquids

315.0 The main thing to be said about PED liquids is that there are a lot of them and they look like Proto-Dravidian. In fact, it is the Proto-Dravidian system intact. Most reflexes are straightforward, but in both Elamite and Dravidian they are liable to sporadic shifts. While the cuneiform script was inadequate, Elamite made considerable effort to keep the distinction, usually by double letter spellings; i.e., (C)V-CV vs. (C)VC-CV. See section 231.3 and rule El.8, table 3.2.

315.1 The laterals, PED **l* and **ḷ*. For both the normal (alveolar) **l* and the special (retroflex, retracted, velarized ?) **ḷ*,⁵ the reflexes are uncomplicated and simple.

$$(18) \text{ } l > l : l$$

$$(21) \text{ } ḷ > ḷ : ḷ$$

The two types of laterals fully reflect the situation found in Dravidian. This contrast can be reconstructed for Elamite, not only on comparative grounds, but

⁵ In earlier work (McAlpin, 1974: p. 95) this phoneme was indicated by *ṭ*.

also because it seems to have been quite consistently spelled, either with a double *ll* (TAL-LU) or with the sign EL. The normal **l* is presumably alveolar and the special **l̥* retroflex as in Dravidian, but there is no information to confirm this one way or the other.

315.2 **Taps and trills, PED **r* and **ɽ*.** The situation concerning the alveolar obstruent PDr **r* (also written *ɽ*) in Dravidian is an involved one. This is due to the fact that PDr **r* functions phonologically as a stop, but except in clusters is phonetically always a tap or trill ([ɾ] in Malayalam, [r] in Tamil, etc.). It has a strong tendency to fall together with PDr **r̥* ([ɾ̥] in Malayalam, [r̥] in Tamil). This same dual nature seems to exist for PED **ɽ*. PED **ɽ* is always attested as PDr **r*, but there is always a certain amount of sporadic shifting with this phoneme. While its phonetic contrast with PDr **r* is maintained by only a few languages (Malayalam, some dialects of Tamil, Konda, Toda, and Kota), it still contrasts morphophonemically in many more. There is no doubt about its Proto-Dravidian status; see Zvelebil (1970: pp. 94–100).

PEI **r* is attested as *r* throughout. Note that Achaemenid Elamite maintains a spelling contrast between **r̥* and **r*: AE *rr* = PEI **r̥*, AE *r* = PEI **r*. Middle Elamite does not have this contrast at all. Clearly Middle Elamite from Susiana is not directly ancestor to Achaemenid Elamite, which is presumably based on the dialect of Anshan.

(17) $r > r : r$

(22) $t > \begin{cases} \text{ɽ} : \text{ɽ}/(\text{V})_V \\ \text{t} : \text{ɽ}/\text{V}_\# \end{cases}$

315.3 **PED **r̥*.** Proto-Dravidian **z̥* (also written *r̥*) is a problem. It has very complex attestations in Dravidian; note Krishnamurti (1958*b*), Burrow (1968*a*), and Emeneau (1971). In the few languages where it is clearly maintained (Tamil and Malayalam), it is a retroflex approximant [ɻ], similar to a midwestern American *r*. It is cited in three stems in PED, in one (46) Elamite has *r̥*, in the other two (47; B3) Elamite has *l* for the same environment. In Dravidian languages where the direct attestation of PDr **z̥* has been lost, a similar alternation of *r̥* and *l* can be found as in Kannada. PDr **z̥* also has other reflexes in these languages, and they can alternate in seemingly arbitrary ways; see section 121.31(6). On the basis of the Dravidian evidence we can reconstruct PED **r̥*, but its Elamite reflexes will require more information for a satisfactory solution.

(20a) $r̥ > \begin{cases} r : z̥ \\ l : z̥ \end{cases}$

(20b)

IV. THE PROTO-ELAMO-DRAVIDIAN LEXICAL ETYMA

410.0 **The PED root.** It is clear that Proto-Elamo-Dravidian (PED) has a root structure essentially identical with that found in Proto-Dravidian; see section 122.0. Specifically, this is a structure of an initial monosyllabic root (C)VC followed by a derivative augment of -V((C)C), the combination of root and augment being referred to as a stem. While Elamite and Dravidian retain many roots as cognates and numerous augments in common, they rarely have stems which are clearly cognate as stems. The augment in *-i* is the only one which commonly corresponds. The spread and development of the augment systems has been extensive in Dravidian. If Elamite had done nothing, let alone the amount that our scanty evidence makes clear (such as the extensive use of an augment *-a* with verb stems), it is unlikely that a significant portion would remain in any cognate corpus. Such is not the case with the root, however. It has remained very stable within Dravidian and within PED. Thus, the concentration for cognate roots leads us to focus on the initial (C)VC almost to the exclusion of all else. This is where we can really talk about Proto-Elamo-Dravidian. Nevertheless, some very real information is lost by concentrating on the root as opposed to the stem. It is the stem, particularly the verb stem, which has a specific and detailed lexical meaning. The information contained in the augment dealing with passives, causatives, mediopassives, multiple action, and transitives has been lost. If the attested reflexes are from very different stems, the attested meanings can be expected to shift, sometimes drastically; see section 422: 20 for examples. This is to be expected and is no problem as long as the underlying root is clearly delineated and understood. Thus, the following lexical etyma concentrate on the initial (C)VC, i.e., on the root. Augments are given where they seem to be cognate, but the same degree of certainty is by no means claimed for them.

410.1 Due to problems with the sources (particularly Elamite meanings), the quality of these entries varies, and all may not stand the test of further knowledge. However, most are solid. Possible problems include the complex entries (8, 20, 26, 64). Truly problem etyma have been separated and are given in appendix II. The massiveness of the data and the high percentage of correspondences make the data as a whole very secure. To clearly disprove the genetic hypothesis, it would have to be shown that almost ninety per cent of these resemblances are due

to other reasons.¹ In spite of any possible weakness in individual etyma, this does not seem at all likely.

421 The Format

421.0 The following entries give the lexical etyma for Proto-Elamo-Dravidian (PED). These entries are concerned with lexical roots only, particularly the initial (C)VC. Noninitial morphological etyma are discussed in chapter V. In these entries the first line has the entry number, the PED reconstruction, its gloss, and the cross references to the relevant phonological correspondence rules in parentheses; see tables 3.1, 3.2, and 3.3. Note that these entries are cited by the entry number following the section 422 with a colon, i.e., 422: 1, etc. The first portion of the entry gives the Elamite reflexes. Occasionally, a Proto-Elamite (PEI) reconstruction is given, but usually the actual forms attested in Middle Elamite (ME) and Achaemenid Elamite (AE) are given.

The next section gives the Dravidian evidence. The reconstruction of Proto-Dravidian (PDr) or of the highest reconstructible subgroup is given first with its gloss. Following a colon and indented, the actual attested forms and their meanings are given according to the standard system used in the *Dravidian Etymological Dictionary* (DED).²

These reconstructions are based only on the evidence available within the group. Since there is currently disagreement on the relationships of the established subgroups in Dravidian, there is something of a problem of consistency here. While there may be reasons for doubting the significance of such groupings as Central Dravidian and North Dravidian (see section 112), they are established in the literature. I have taken the simple way out and used Proto-Central-Dravidian to mean that the etymon has

reflexes in both Telugu-Kui and Kolami-Parji without making any claims of the ultimate validity or implications of such a statement. The term *Proto-Dravidian* has been restricted to etyma with widespread reflexes or to those having reflexes in subgroups which are noncontiguous and clearly not relatable; for example, Tamil-Kodagu and Kolami-Parji. In particular, Proto-Dravidian status has not been given to a set of forms attested in South Dravidian and in Telugu unless it is very clear that the Telugu form is not a loan. Etyma with reflexes in South Dravidian and Telugu-Kui have generally been given Proto-Dravidian status, although sometimes with hesitation. Of course, all terms which are cognate with Elamite are automatically Proto-Dravidian. Occasionally, a Proto-Dravidian or Proto-Elamite reconstruction has been supplied in the discussion on just such a basis. However, the reconstructions given in the entries are internally derived only.

A third portion discusses the etymon and any problems if it is needed. Most are obvious and do not require such discussion. A certain familiarity with the nature of the comparative method and semantic drift through time has been assumed.

421.1 Abbreviations

421.11 The following abbreviations have been used to indicate the sources of the cited forms.

For Elamite:

K	König, 1965: pp. 181–228	(for Middle Elamite)	
TZ1	Reiner, 1969: pp. 116–118	} Tchoga Zambil materials	
TZ2	Lambert, 1965 ³		
TZ3	Stève, 1967		
TZ1,2,3, etc., combinations of the above			
PFT	Hallock, 1969: pp. 663–776	(for Achaemenid Elamite)	
L	Lambert, 1974	(for Old Elamite)	

For Dravidian:

DED	Burrow and Emeneau, 1960
DEDS	Burrow and Emeneau, 1969
Den	Burrow and Emeneau, 1972
DED(S), DED(n), DED(S,n)	combinations of the above
TL	Tamil Lexicon
Br(Sw)	Warren Swidler, personal communication on Brahui

421.12 The following abbreviations have been used to indicate dialect, language, or language group being cited.

¹ Marvin Bender (1969) has argued that as few as three or four correspondences in initial CVC in basic vocabulary are above chance occurrence. The correspondence rate between Elamite and Dravidian has run a full order of magnitude above this. Given the distribution of high rates between verbs (resistant to borrowing) and low rates between nouns (easily borrowable) and the systematic phonological correspondences, it is virtually impossible for this high rate of correspondence to be due solely to borrowing, although it may be a minor factor; see appendix II, section D.

² Note that the *Dravidian Etymological Dictionary* (Burrow and Emeneau, 1960; 1969) does not standardize orthographies or citation forms. Words are presented in the form traditional to the sources for that language. The endings of most verb citations should be ignored, i.e., the *-(kk)uka* of Malayalam, the *-ānā* of Gondi, the *-uni* of Tulu, the *-nā* of Kurux, the *-ing* of Brahui, etc. Minor corrections to DED forms have been made, i.e., all Malayalam verbs are cited in the gerund *-(uka)* rather than some in *-a*, Malto's uvular voiced stop is given as *g* rather than *ḡ*, etc.

³ Not all of the words cited from Lambert (1965) appear in his glossary. This is particularly true of the words in the Middle Elamite bilingual; note appendix I.

For Elamite:

PEI	Proto-Elamite (reconstruction)
OE	Old Elamite
ME	Middle Elamite
RAE	Royal Achaemenid Elamite (formal inscriptions)
AE	(other) Achaemenid Elamite (Persepolis tablets)
(R)AE	both RAE and AE

For Dravidian:

PDr	Proto-Dravidian
(P)SDr	(Proto-)South Dravidian, Tamil-Kodagu-Kannada (-Tulu)
(P)CDr	(Proto-)Central Dravidian, Telugu-Kui and Kolami-Parji
(P)NDR	(Proto-)North Dravidian, Kurux-Malto and Brahui
(P)TaKod	(Proto-)Tamil-(Malayalam, Irula, Toda, Kota)-Kodagu
(P)TeKui	(Proto-)Telugu-(Gondi, Konda, Pengo, Manda, Kuwi)-Kui
(P)KolPa	(Proto-)Kolami-(Naiki, Gadaba)-Parji
(P)KxMt	(Proto-)Kurux-Malto

The abbreviations for individual Dravidian languages are according to the standard system (cf. *DEDS* and Zvelebil, 1977: pp. 4–5) with the following prefixes: *P* Proto-, *O* Old, *M* Middle, *N* New, Modern, *C* Colloquial. See table 1.1.

421.13 Other abbreviations include the following:

PED	Proto-Elamo-Dravidian
El.	Elamite rules; see table 3.2.
Dr.	Dravidian rules; see table 3.3.
IA	Indo-Aryan
Skt.	Sanskrit
Akk.	Akkadian
trans.	transitive
var.	variant

422: *Lexical Etyma in Proto-Elamo-Dravidian*

1. PED **aš* cattle, herd of cattle (1-11)
(R)AE *aš* herd(s), livestock (PFT).
PDr **āy* cow; the cowherd caste:
Ta. *ā(n)* female ox, etc., *āy* cowherd caste, *āyam* herd of cows. Ka. *ā*, *āvu* cow. Te. *āvu* id. Kur. *ōy* id. Malt. *ōyu* id. (DED(S) 283)
2. PED **it-* to put, place (2-12-, El.1a)
ME *ta-*, *da-* to put, place, set, fit in (TZ1, 2,3,K). (R)AE *da-* to set, place, deposit, send (PFT). Presumably the PEI form is **ita-*; see rule El.1a.
PDr **it-* to put, place, set, lay; throw (?):

Ta. *itu* to place, deposit; throw, cast away. Ka. *idu* (*it-*) to let go, put down, put, place. Te. *idu* to place, put, lay, give, offer. Konda *id-* to put. Kui *ita* (*it-*) to place, put down. (DED(S,n) 375) Br(Sw). *iting* to put.

A basic Dravidian verb. The central idea in Tamil is to put something down casually or unintentionally.

The Elamite term has lost its initial vowel and has added an augment *-a*. This augment may have been productive in Elamite or may be cognate with the Proto-Dravidian noun formative **-aN*; cf. PDr **itam* 'place, space' (DED(S,n) 368). This type of alternation of noun and verb stems is common in Dravidian and is one of the complexities involved in derivation. See section 422: 70 for further examples of this type of derivation.

3. PED **inc-* to receive (2-14-10-, El.2,4, Dr. 7)
ME *huns-* to allocate, distribute (K).
AE *unsa-* to receive in exchange (PFT).
PKxMt **inj-r-* to receive:
Kur. *injrnā* to receive, accept.
Malt. *injre* to receive, take in hand. (DED 365)
Both Kurux and Malto have the root with the mediopassive augment *-r-* which adds the idea of 'for oneself'. The basic root should be closer to 'exchange'; see section 132.111.

4. PED **it(a)š* great, large (2-22-(1)-11, Dr.2)
ME *riša-* large, to enlarge (TZ3,K). (R)AE *irša-* great (PFT).
PDr **iray* a great person, lord:
Ta. *irai* anyone who is great, king, lord, etc. Ka. *ere* state of being a master, master. OTe. *era* lord. (DED 448)
5. PED **uk-* to be above (3-9-)
ME *ukka* to cover, be on top of; above (TZ2,K). (R)AE *ukku* upon (PFT).
PDr **uk(a)-* to ascend, jump up:
Ta. *uka* to ascend, rise, soar, *ukaļu* to leap, bound, frisk, *ukai* to rise, leap, jump up. Ka. *oge* to come forth, arise,

be born. Tu. *ubarū* high, above. Te. *unkincu* to spring, jump. (DED(S) 477)

6. PED **upaṭ* brick (3-15-1-22)

ME *upat* brick(work) [= Akk. *libittu*] (TZ1,2,3). See appendix I.

PSDr **uppar*- bricklaying, plastering: Ka. *uppāra* bricklayer, plasterer (DED 539). Ta. *upparavar* (<Te. *uppāra*) name of a caste of tank diggers (DED 537).

7. PED **um*- to process grain (3-16-)

AE *umi*- to grind (grain) (PFT).

PDr **um* husk, chaff:

Ta. *umi* husk; to become chaff. Ko. *u·ym* flour. Tu. *umi*, *ummi* husk or chaff of paddy. Te. *umaka* husk, chaff. Kur. *uṅk* id. (DED(S) 548)

Dravidian has shifted the semantics from the process to the byproduct.

8. PED **ul*- inside, interior; mind, heart (3-21-)

A. ME *elma*- to see, think, reflect (K). (R)AE *elma*- (var. *ulma* ?) to consider, think, plan (PFT). The value of the sign EL is somewhat in doubt.

B. ME *ulhi* dwelling place, residence, sanctuary, chapel (TZ2,3). (R)AE *ulhi* (royal) house, estate (PFT).

A-B. PDr **ul* inside, interior; mind, heart; to think:

A. Ta. *uḷlam* mind, thought, *uḷlu*, *uḷku* to think. Kod. *uḷli* inner thought. Konda *olbi*- to think, ponder. Malt. *ugli* mind, heart, *ugleye* to think.

B. Ta. *ul* inside, interior, mind, heart. Ka. *ul*, *ol* inside. Te. *lō* in, inside [Dr.3]. Pa. *ole(k)* house. Ga. *ule* id. Kur. *ulā* inner room, in, inside. Malt. *ule* inside, within. (DED(S,n) 600) A basic Dravidian term.

9. PED **ut*- to consider, believe (3-22-)

RAE *uri*- to believe (PFT).

PDr **ur*- to consider:

Ta. *uru* to pass in one's mind, think. Te. *uru* to care for, heed. Br. *hunning* to look (at/for), consider. (DED(S) 610) Cf. DED(S) 625, PDr **unṇ*- to think, consider.

10. PED **en*- to say, quotative (4-14-, El.1a)

ME *na*- to say (K). (R)AE *na*- to say (PFT). Presumably the PEI. form is **ena*-; see rule El.1a.

PDr **eṇ*- to say, speak, quotative:

Ta. *eṇ* to say, utter. Ka. *en* (*end*-), *an* (*and*-) to say, speak. Te. *anu* (OTe. *en*-) to say, utter, speak. Kol. *en* (*ent*-) to say. Konda *in* (*iṛh*-) id. Kur. *ānnā* to say, tell. (DED(S,n) 737)

This word is the single most fundamental and expressly Dravidian term in Dravidian languages. It is the most common verb in Tamil by a factor of three. It is mandatory in all cases of quotation and has numerous derivative syntactic uses. It is the only verb in Dravidian which can embed a sentence with a full finite verb inside another sentence. See section 141.3.

This crucial Dravidian verb has striking parallels in the Royal Achaemenid Elamite quotation formula. There, in spite of a general reversal of syntax, the verb *na*- stands between the matrix and embedded sentences, exactly where it must appear in a Dravidian quotation; see also section 551.11.

11. PED **ere*- to burn, blaze, scorch (4-17-4-, El.6, Dr.1)

ME *eri(en)tam* baked brick (TZ2,K).

PDr **eri*- to burn, blaze, scorch in flame:

Ta. *eri* to burn, blaze, burn (*trans.*), scorch in flame. Te. *eriyu* to burn, grieve. Konda *er*- to kindle fire, light, burn. (DED(S,n) 694)

12. PED **otah*- to help (5-13-1-7-, El.1a, Dr.2,8)

ME *tahha*- to protect, shelter, guide, help (TZ2). AE *da(h)u*- to help (PFT). PEI **utah*-(?); see rule El.1a.

PSDr **ūtak*-/**ūtav*- to assist, be of use, help:

Ta. *utavu* to give, contribute help. Ma. *utakuka* to serve, be of use, help. Ka. *odagu*, *odavu* to be at hand. Tu. *odaguni* to be ready. Te. *odavu* to be serviceable, give. (DED(S) 522)

Compare DED 820, Ta. *ottācai* 'help, assistance' for an indication of the initial vowel. An alternation

of *k* and *v* seems to be an indication of Proto-Dravidian intervocalic **H*, i.e., PDr **otaH*-.

13. PED **on-tə* one thing (5-14-22-6)

AE *unra* each, each one, one (PFT).

PDr **onrə* < **on* + *tə* one nonmale:

Ta. *onru* the number *one*, one thing.
Te. *ondu* one thing. Konda *unri* one woman or thing. Kur. *ōnd* one whole, one full. (DED(n) 834d)

While the most common form of the numeral *one*, this form is unusual in that it ends in *n* rather than the expected *r*; see section 131.52 for discussion.

The Elamite form argues for the assimilation of PED **t* to an alveolar **ʈ* at the PED stage and for reconstruction with full assimilation. See also section 541.2 for further details.

14. PED *(*h*)*aš-* to measure, set limits ((7)-1-11-, El.7b)

AE *haša-* to count, reckon, *halnut hašira* auditor (PFT).

PSDr **āy-* measure, extent; boundary, limit:

Ta. *āyvu* width. Ka. *āya* measure, extent, rule, standard. Tu. *āya* measure, proportion. Te. *āyatte* boundary, limit, *āyakaṭṭu* rate, standard. (DED 311)

15. PED **haṭ-* to destroy by pounding (7-1-12-)

ME *hatta-* to demolish, destroy, deface (TZ3).

PDr **aṭ-* to beat, pound, kill, destroy:

Ta. *aṭu* (*aṭṭ-*) to beat, *aṭi* to strike, beat, overcome, *aṭar* to attack, kill, destroy. Te. *aḍucu* to beat, strike, break, destroy. Pa. *aṭṭ-* to strike. Konda *aṭ-* to hit. Kui *ḍamba* to pound [Dr.3]. (DED(S,n) 67)

16. PED **han-* to like, love (7-1-14-)

ME *hani-* to like, love; want, wish (K). (R)AE *hani-* to wish (?) (PFT).

PSDr **aṇ-/aṇ-* love, friendship:

Ta. *aṇpu* love, attachment, *aṇi* love, *āṇam* love, friendship. Ma. *ampu* id.

Ka. *aṇpu* relationship, friendship, *ammu* to be willing, wish, desire. (DED 279)

This etymon was first suggested by I. M. Diakonov (1967: p. 112).

17. PED *(*h*)*api-* to apply pressure ((7)-1-15-2-, El.7b)

(R)AE *hapi-* to apply pressure (PFT).

PDr **avi-* to become repressed/subdued, be extinguished; to suppress, repress, subdue, extinguish:

Ta. *avi* id. Ma. *avikkuka* to destroy. Ka. *avi* to go out, perish. Go(SR) *aviyānā* to be tired. (DED(S,n) 226)

18. PED **hiṭ-* to herd (goats); goat (7-2-12-, El.7b)

ME *hit* herds, possession(s) ? (K). AE *hidu* adult female goat, goats in general (PFT).

PDr **iṭ-* to herd (esp. goats):

Ta. *iṭai* the herdsman caste, *iṭar* shepherds. Ma. *iṭayan* a caste of shepherds and cowherds. (DED(S) 382) Br(Sw). *hiḍing* to gather, herd.

19. PED **hit-* to distribute (7-2-13-, El.2,5,7b)

ME *hute-* to distribute (K). AE *iddu-* to issue (PFT).

PNDr **itt-* to distribute:

Kur. *itnā* to dole out, distribute. Malt. *ite* to divide (as a share). (DED(S) 391) Br(Sw). *hitting* to distribute (shares).

20. PED **huḷ-* to exist, be (in a place) (7-3-21-, El.7b)

A. ME *hulu(h)* to join, fit together ? (TZ3). (R)AE *ull(a)-* to (transport and) deliver (PFT).

B. ME *huhta-*, *hutta-* to do, make (TZ3,K). (R)AE *hutta-* to make, do (PFT).

A-B. PDr **uḷ-* to exist, be, be in a place:

Ta. *uḷ* to be (in existence), have, *uṇmai* existence, reality. Te. *uṇdu* to be, dwell, exist, live. Kol. *an-* (*and-*) to be in a place. Br. *anning* (*uṭ*, *us*, *un*, *ure*, *ur*) to be. (DED(n) 599)

A fundamental Dravidian term, often irregular and highly defective.

The argument linking these words is a very Dravidian one, where such contrasts in the degree of causality are common; see

section 132.13. The Proto-Dravidian form and meaning attest the PED affective (intransitive) **hul* 'to be in a place' (zero degree causation, no agent). The first term in Elamite (A) attests the PED effective (transitive) 'to put (i.e., cause to be) in a place' (first degree causation, one agent). This form may or may not have an augment to the root, *-a-*. The second Elamite term (B) attests the causative (second degree causation) in PED which is often more abstract, literally 'to cause to cause to be in a place', i.e., 'to cause to come into existence', hence 'make'. It clearly has the augment **-tə*; cf. section 555.1.

This verb **ul*, which is highly irregular in Dravidian, unfortunately does not have a simple causative, but uses the verb **āku* (see section 422: 42) in a periphrastic manner: Ta. *ul* 'to exist', *uṇṭāku* 'to begin to exist, become', *uṇṭāku* 'to create, make'. These closely match the foregoing PED terms in meaning. The Middle Elamite form *huhta-* has the clearest attestation of the causative in *-tə*, which is cognate with the normal Dravidian causative; see section 555.1 for further discussion of details. The second *h* in ME *huhta* may be an assimilated *l*. In Old Tamil, a similar assimilation occurs: *al* 'not so' + *tiṇai* 'class' → *akṛiṇai* 'neuter class', where *k* (*āytam*) represents a voiceless alveolar *l*. Modern pronunciation of *k* is a possibly hyperurban [x].

21. PED **heš-* to know how to (7-4-11-, El.7b)

ME *hiš* name (TZ3,K). (R)AE *hiš* name, *hiše* his name (PFT).

PDr **ey-* to know how to, understand:

Ta. *ey* to know, understand, *eyyāmai* ignorance (lit. not knowing-ness). Ga(P). *etap-* to think. Konda *nes-* to know, be capable of [Dr.3]. (DED(S) 692)

The Elamite term is the result of a slight semantic shift to 'know name of' of which it is the derivative noun.

22. PED **hoṭ-* to break into pieces (7-5-12-)

ME *hutū-* to destroy, break up (a statue) (K).

PDr **oṭ-* to break asunder:

Ta. *oti* to break off, be ruined; break, destroy, *uṭai* to break into pieces,

fracture [Dr.2]. Ka. *oḍi*, *uḍi* to be broken, crack, burst. Te. *ōḍu* to be defeated. Pa. *ōḍ-* to break, burst. (DED(S) 799)

23. PED **kaṭ* bed, throne (9-1-12)

RAE *kat* place, throne (PFT).

PDr **kaṭṭil* (<**kaṭ* + *il* place) cot, bedstead, seat of distinction:

Ta. *kaṭṭil* cot, bedstead, (OTa.) throne. Te. *kaṭṭi* litter. Go. *kaṭṭul* bed. Konda *kaṭel(i)* cot. Kui *gaṭeli* id. Br. *kaṭ* bed (<IA ?). (DED(S) 960)

This etymon was suggested by Rajam Ramamurti.

24. PED **kap* cover (9-1-15, Dr.1,6)

ME *kap-* to shut (up), hide (TZ3). AE *kap* treasury (PFT).

PDr **kap-* to overspread, cover, overshadow:

Ta. *kappu* to overspread (of clouds), *kavi* to cover, overshadow. Ka. *kappu*, *kavi* to cover. Pa. *kapp-* to cover, overspread. Konda *kap-* to overcast. Kur. *khapnā* to cover exactly, fit on hermetically. (DED(S,n) 1024)

25. PED **karə* young animal (9-1-17-6)

AE *kariri* (*kurriri*, *karri*) kid (PFT).

PDr **karu* fetus, young of animals:

Ta. *karu* fetus, embryo, egg; young of animal. Te. *karuvu* fetus, *kari* uterus (of animals). Pa. *kerba* egg. (DED(S,n) 1074) Cf. DED(S) 1076, *karukkāy* immature fruit.

26. PED **kit(-i)-* (to have) well being, good fortune (9-2-22-(2), Dr.4a)

A. PEI **kiri* (<PED **kit-i*) to be favorable:

ME *kiri-*, *giri-* to be favorable; luck, success (TZ2,3). Cf. AE *ankirir* devotee ? (PFT).

B. PEI **kit* (<PED **kit*) fortune, luck:

ME *sitme*, *zitme* fortune, luck [El.4] (TZ2,3). This correspondence assumes *k* > *c* before *i*.

A-B. PTAkōd **cīr* to be excellent; prosperity, wealth:

Ta. *cīr* to be excellent, suitable;

prosperity, wealth, excellence.
Ma. *cīru* good condition, luck,
cīr good condition, stoutness.
(DED 2157)

Note the sporadic shift of *r* to *r* in these forms. Here it occurs in the nonintervocalic environments where the contrast is often neutralized, as in Malayalam. The *r* is the more commonly attested form. This word is not cited in Dravidian with *k-*, but it is found only in the southern palatalizing group where *k > c* is the norm. Presumably the base form is PDr **kīr* [Dr.4a].

This etymon is somewhat complex in that it involves a number of sound shifts and two reflexes in Elamite. The main difficulty is that Elamite attests both *k* and *c* as the initial consonant. If there was a shift of *k > c*, then why *kiri*? It is possibly significant that ME *kiri* is written with GI rather than KI, which may indicate some variation in pronunciation. If this sole example is not confirmed, then only one of the Elamite words can be cognate with Tamil *cīr*, but it could be either one. At a minimum, there is at least one correspondence with excellent semantics.

27. PED **kute-* to settle, set right (9-3-13-4-, El.5, Dr.1)

ME *kuten* (*kitin*, *kittin*) justice, law, judgment (TZ2,3). RAE *kiten* ban, interdiction (PFT).

PDr **kuti-r* to be settled, fixed, determined:

Ta. *kutir* id. Ka. *kuduru* to settle, recover; be set, arranged, fixed, set right. Tu. *kudi* fixed, settled. Te. *kuduru* to become settled, etc., *kudurcu* to arrange, adjust, settle, cure, rectify. Konda *guduri* a long pial [raised platform] for pots, etc. (DED(S) 1421)

This verb stem shows the common augment *-r* (medio-passive ?); see section 132.111.

Dravidian verb roots do not admit the vowels *e* and *o* as the second vowel. Hence, the vowel shift of *e* to *i* is automatic in

this environment. This vowel is often influenced by vowel harmony. See section 122.2.

28. PED **koṭ-* arrow (9-5-12-)

ME *kuta* arrow [= Akk. *qanû*] (TZ1,2,3). See appendix I.

PKolPa **koṭte* small stick, arrow:

Kol. *koṭte* small stick, arrow. Nk. *koṭte* small stick. (DED 1724)

29. PED **ca-* to move forward (10-1-, Dr.5c)

ME *sa-* to move, stir, march (K). (R)AE *sa-* to go (to), go off (PFT).

PDr **cā-k-* to move forward, proceed:

Ta. *cāy* to march in crowds; happen.
Tu. *sāguni* to proceed; move forward.
Te. *cāgu* to go on, proceed. Kuwi *sāginai* to manage. (DED(n) 2006)

30. PED **cah-* to die (10-1-7-, Dr.5c,8)

ME *sa-* his life should be cut off (K), *sahri* death, destruction ? (TZ2,3).

PDr **caH-* to die:

Ta. *cā(k/v)/ce-* to die, be blighted. Ma. *cākuka/ca-* to die. Ka. *sāy/sa-* id. Te. *caccu/cā-* id. Konda *sā-* id. Malt. *keyel/kec-* id. Br. *kahing/kas-* id. [Dr.5d]. (DED(S,n) 2002)

A basic common term in Dravidian languages. An archirregular verb showing some of the best evidence for a PDr **H*.

31. PED **cam-* beauty, grace (10-1-16-, Dr.5a,7)

ME *cana* ladies [used in titles of goddesses] (K).

PSDr **caN* properness, straightness, elegance; beauty, grace, niceness [*c-* is commonly lost]:

Ka. *cannu* id. Tu. *canna* handsome, well. Te. *cennu* beauty, grace, elegance. (DED 1999a) Ta. *a*, *am* beautiful, *ammai* beauty. Ka. *anu* fitness, loveliness, proper way. (DED 1999b) Cf. DED 1921, Ta. *cantam* beauty, form, manners.

32. PED **car-* to tear apart, tear out (10-1-17-, Dr.5c)

ME *sarra-* to clear away (rubbish); demolish (TZ2,K). RAE *sari-* to destroy (PFT).

PDr *car- to be torn; tear:

Pa. *car-* to be torn, *carip-* to tear. Go. *sarrānā* to be split (of wood), be torn. Kur. *carrnā* to tear, rend, plow (for first time of season). (DED(S) 1951)

33. PED *ci- to give (inferiors), allow (10-2-, Dr.5a,5c)

ME *si-* to consecrate, bless (K).

PDr *cī- to give, allow:

Ta. *ī* to give to inferiors, agree, consent. Ka. *ī* (*itt-*) to give, allow, permit. Te. *iccu/ī-iiyy-* to give. Kol. *si-* id. Konda *sī-* id. Kur. *ci'inā* to give, allow. Malt. *ciye* to give away. (DED(S) 2138) A basic Dravidian term.

34. PED *cik- to scrape, pare off (10-2-9-, E1.2, Dr.5c)

ME *suku-* to scratch out, obliterate (TZ3,K).

PDr *cīk-/cīv- to scrape, peel, cut off in thin strips:

Ta. *cī* to scrape, *cīvu* to pare off, shave, or scrape off. Ma. *cīkuka* to scrape, smooth, polish, *cīvuka* to scrape, peel, polish. Te. *civvu* to cut, shave, pare. Kol. *sivva* piece of fuel. (DED(S,n) 2140) [PDr *ciH ?]

35. PED *cina small, young (10-2-14-1)

AE *zinna* "qualifies boys, pps. 'infant' " (PFT: p. 775).

PDr *cīṇṇa small, young (particularly of children): Ta. *cīṇṇa* small, little, mean, low, young. Ka. *cīṇṇa* a little one, a boy. Te. *cīṇṇa* small, little, young. Pa. *cīn* little, *cīnd*, *cīnd* son. Br. *cunā* child, *cunak* small. (DED(S) 2135)

In spite of weak attestation in Elamite, this is a striking correspondence with a basic Dravidian word.

36. PED *cink- to wane (10-2-14-9-, Dr.1,7)

ME *sinki-* to sink (K).

PDr *ciṅk- to diminish, wane, decline:

Ta. *cīṅku* to diminish, wane, perish, *cīkal* to diminish, decrease [Dr.1]. Kod. *cikk-* to become tired. Tu. *tirkū* [Dr.5b], *sirkū* fading, weakness. Te. *cikku* to become lean. Pa. *ciṅg-* (sun) declines after midday. (DED(S,n) 2065)

37. PED *cu- to see (10-3-, E1.5, Dr.5c)

(R)AE *zi-* to see (PFT).

PDr *cūr- to see, observe:

Ta. *cūr* to deliberate, understand. Tu. *tūpini*, *hūpini* to see, look, examine. Te. *cūcu* (*cūd-*, *cū-*) to see, observe. Pa. *cūr-* to see. Konda *sūr-* id. (DED(S) 2257)

One of the most widespread of the Dravidian words for 'see'. The *-r-* is an augment probably meaning 'around'; see section 132.113.

38. PED *cel prosperity (10-4-18, E1.6)

ME *silin* plenty, abundance, well-being, comfort (TZ3).

PSDr *celuv- wealth, prosperity, beauty:

Ta. *celvam*, *celvu* wealth, prosperity, beauty, enjoyment, *celvikkai* luxury, affluence, *cellam* opulence. Ka. *calu*, *caluve* beauty, elegance, grace, propriety. Tu. *celuvikē* beauty, comeliness. Te. *celuvamu* beauty. (DED 2291)

39. PED *cok- to put in order (10-5-9-, E1.5, Dr.5c)

ME *zukka-*, *sukka-* to bring to order, place correctly (K). (R)AE *zikka-* to place, set, deposit (PFT).

P(S)Dr *cok- neatness, refinement:

Ta. *cokucu* (<Te.?) refinement, neatness, luxury, *cokkam*, *cokku* purity, excellence, beauty. Ka. *soga(yi)su* to shine; be handsome, pleasant, agreeable; appear. Tu. *cokka* pure, genuine, neat. Te. *sogasu* (<Ka.?) beauty, grace, *sogiyu* (<Ka.?) to be agreeable. (DED 2320)

40. PED *cok- to pull off (10-5-9-, E1.4)

ME *suk-* to demolish, efface (TZ3).

PDr *cok- to tear off, peel, plunder, pluck:

Ka. *sugi* to tear off, peel, plunder, *ugi* to pull, draw away, rob, tear off, pull out [Dr.5a]. Kur. *cokhnā* to pluck, cull, *cokhrnā* to be plucked, fall off. Malt. *coGe* to pluck off, *coGre* to drop off. (DED(n) 2173)

41. PED *col- to speak aloud (10-5-18-)

ME *zulu-* to call, shout, pray aloud (K).

PDr *coll- to speak, utter, say:

Ta. *col(lu)* to say, speak, tell, utter.
Ka. *sol(lu)* to say, speak, tell. Pa. *cul-*
to say. (DED(S) 2335)

42. PED *šak- to be (equivalent to), become (11-1-9-)
AE šak counterpart (payment), equivalent
(PFT). A technical term of some impor-
tance; see Hallock, 1960: pp. 91-92.

PDr *āk- to be (so and so), become:

Ta. *ā(ku)* to be, happen, equal. Ma.
ākuka to be (so and so), become. Te.
agu, *avu* (*ayi*, *kā-*) to be, become.
Konda *ā-* (*āt-*, *ān*) id. Br. *anning* (*an-*,
ar-, *as-*, *a-*) to be. (DED(S) 282)

The verb of identity which is often
deletable. This is an absolutely
fundamental verb in Dravidian lan-
guages with many grammatical func-
tions.

43. PED *šak sprout (11-1-9)

ME šak son (TZ3,K). (R)AE šak son (PFT).

PTeKui *āk- leaf, sprout:

Ka. *āku* leaf, rice seedling, sprout
(<Te.) Te. *āku* leaf, petal, rice
seedling. Go. *ākī* leaf. Konda *āk*
id. Kui *āku* id. (DED(S) 284) Cf.
DED(S) 16, Ta. *akai* to flourish,
sprout.

A dramatic, but by no means unusual
(note colloquial English) shift in meaning
has occurred in Elamite.

44. PED *šar- to collect (11-1-17-)

(R)AE šarra- to collect, assemble (?) (PFT).

PDr *ār- to collect, gather:

Ka. *ārisu* to collect, gather, pick out,
select (DED 319). This verb is usually
found compounded with PDr *āy- to
search, examine, select (DED(S) 306)
to give PDr *ār-āy- to investigate,
examine:

Ta. *ārāy* to investigate, examine,
seek. Ka. *āray* to search, investigate.
Te. *ārayu* to think, consider, search.
Kondarēy- to search [Dr.3]. (DED 319)

It is obvious that *ārāy- is a com-
pound stem, since in Tamil-Kodagu
no simplex verb stem has two long

vowels. The independent existence of
PDr *āy confirms this observation.

45. PED *šal- head, uppermost part (11-1-19-)

(R)AE šalu a high social class (PFT).

PDr *tal-ay head, top, chief:

Ta. *talai* head, top, *talaivan* chief,
headman. To. *taš* superior division of
ti· dairy, *tašm* top. Ka. *tale*, *tala* head,
being uppermost or principal. Te.
tala head, top. Konda *tala* head. Malt.
tali hair of head. (DED(S) 2529)

46. PED *šar- to be low (11-1-20a-)

ME šara below, under (TZ1,K), šarama
later, following, šari substratum, support,
platform (K). See appendix I.

PDr *tāz- to be low, become low:

Ta. *tār* to fall low, be low, flow down,
descend, sink, decrease, hang down,
taṛai to hang down, bow down, *tāra*
below, under *tārmai* humility, degra-
dation. Ma. *tāruka* to sink below,
come low, *tārē* under, below, down.
Ka. *tār* being low, sinking; the bottom.
Nk. *taṭ* underneath. Br. *daṛing* to get
down, descend. (DED(S,n) 2597) A
widespread verb commonly function-
ing as a postposition.

- 47A. PED *šar shoot, stalk (11-1-20b)

ME šaliha a bodypart, leg? (K).

PSDr *tāz stem, stalk; leg:

Ta. *tāl* stem, stalk; leg-foot. To.
to·*ṭ* thigh of animal's hind leg, tree
trunk. Ka. *tār* stem, stalk. Kod.
ta·*ḷi* stem. (DED 2603)

- 47B. PED *šar- to sprout (11-1-20b-)

ME šali twig, branch, post (K).

PDr *taž- to sprout, protrude, flourish:

Ta. *taṛai* to sprout, thrive. Ma. *taṛa*
shoot, green twig with leaves. Ka.
dale to become abundant. Kui *dalga*
to spread over a space, increase.
? Br. *trikking* to sprout, protrude.
(DED(S) 2545)

These two entries, 47A and 47B, are
certainly related.

48. PED *šaṭ- to cut off, cut down (11-1-22-)

ME šari- to cut, hew (TZ2,3). (R)AE šara-
to cut (off), apportion (PFT).

PDr **tar-* to cut off, cut down:

Ta. *tari* to be cut off; cut off; wooden post. Tu. *taripuni* to lop off. Te. *tarugu* to slice, chop. Nk. *targ-* to cut. Malt. *tāre* to cut down, fell. (DED(S,n) 2562) Cf. DED(n) 2458, Ta. *taṭi* to hew down.

49. PED **šin-* to arrive, yield (11-2-14-)

ME *šinni* to approach, arrive, occur (TZ1,2,3,K). (R)AE *šinnu-* to come (PFT).

PDr **īn-* to yield, yean, bear:

Ta. *īn* to bear, bring forth, yean, yield. Ka. *īn* (*īd-*) to bring forth young, yean. Te. *īnu* to yean, bring forth, bear. Pa. *īn-* (grain) produces head. Br. *hīning* to lamb, foal, kid, calf, etc. (DED(S) 473)

50. PED **śut-* to relinquish (11-3-22-)

AE *šura-* to present (?) (for provisions, etc.) (PFT).

PDr **tur-* to relinquish, give up, throw away:

Ta. *tura* to leave, relinquish, renounce. Ka. *toṛe* to put away, abandon, quit, give up. Te. *toṛāgu* to abandon, quit, renounce. Konda *turh-* to remove weeds. Kui *tuhpa* to cast away, throw off, abandon. ? Malt. *tuwe* to throw away, disregard. (DED(S,n) 2768)

51. PED **šet-* to pay tax or tribute (11-4-22-)

ME *šerum* tribute (animals ?) (K).

PDr **teṛ-* to pay (tax):

Ta. *tirai* tribute. Ka. *teru* to pay. OTe. *tere* a kind of tax. Kui *tehpā* to repay, return. Go. *terānā* to repay. (DED(S) 2833)

52. PED **taḷ-* to push in (13-1-21-)

ME *tallu-* to write (TZ3,K). (R)AE *talli-* to write (PFT).

PDr **taḷ(l)-* to push, shove, reject:

Ta. *tallu* to push, force forward. Ka. *tallu* to push, shove away, thrust. Tu. *talluni*, *talluni* to push in, press through. Te. *talāgu* (*tala-*) to be lost; remove; clear away crowds. (DED 2559)

A striking correspondence with almost perfect semantics for a genetic connection,

considering that Elamite was always written on clay or inscribed. The Dravidian words for 'write' usually come from verbs meaning 'paint' or 'draw'.

53. PED **tuk-* to push (13-3-9-)

(R)AE *tukki-* to cut, engrave (PFT).

PKxMt/PDr **tukk-* to push, shove:

Kur. *tukknā* to give a push to, shove. Malt. *tuke* to push, remove. ? Ka. *dūku* to push. (DED(n) 2689)

This etymon is possibly related to section 422: 58.

54. PED **tuṭu-* to mention, cite, say (13-3-22-3-, E1.5)

ME *turu-* to speak, give orders (TZ3,K).

(R)AE *tiri-* to speak, say, tell, call oneself (PFT).

PDr **tūru-* to mention (a person's name), cite, blame:

Ta. *tūru* to traduce, slander. Ka. *dūru* to bear tales, blame, reproach, abuse. Te. *dūru* to reproach, blame, censure. Kui *dohpa* to mention a person's name, cite; accuse, blame; praise. (DED(S) 2793)

This term has commonly become a pejorative, but Kui seems to have kept more of the original meaning.

55. PED **tenk-* to pull, drag; take (13-4-14-9-, E1.6, Dr.1,7)

ME *tengi-* to bring, take or carry away, remove, drag, tow or haul away (K). AE *tinke-* to send, bring back (PFT).

PDr **teku-* (<**teṅku*) to pull, drag away; take, receive, steal [note reshaping from rule Dr.1]:

Ta. *tekku* to receive, take, *tevvu* to get, take, steal. Ka. *tege*, *tegu* to pull, draw towards oneself; take away, remove. Tu. *teguni* to take. Te. *tigiyu*, *tigucu*, *tivvu* to pull, draw, drag, attract, take, *tīyu*, *tiyyu* to take, remove, draw. Kol. *tiv-* to pull. Nk. *tivv-* to pull, draw. (DED(S) 2804)

56. PED **tep-* to put down (13-4-15-)

ME *tepu-* to put down, deposit, shut in (TZ2).

PKolPa **tap-* to put (down):

Kol. *tap-* to put. Nk. *tap-* id. Pa. *tapp-* to put, plant, (cow) gives birth. (DED(S) 2500)

57. PED **to(h)-* to seize (13-5-(7)-)

ME *du(h)-* to take, seize, carry away (TZ3). (R)AE *du-* to receive, take (PFT).

PDr **to(ñ)c-* to plunder:

Br(Sw). *duzzing* to rob. PTeKui **dōc-* to plunder:

Te. *dōcu* to plunder, rob, *dōguru* theft. Konda *dōs-* to pillage, plunder. (DED(S) 2919)

All attestations in *d-* may be significant.

58. PED **toh-* to pound, crush, trample (13-5-7-, Dr.2,8)

ME *tuha-* to tear out, destroy [= Akk. *nasāhu*] (TZ1). See appendix I.

PDr **tok-* (or **toH-* ?) to pound, trample:

Ta. *tukai* to tread on, trample, pound in mortar, *tuwai* to tread, pound. Ka. *tōku* to beat, strike. Kui *tōga* to kick. Pe. *tog-* to tread, step on. Kur. *tōknā* to stomp. (DED(S) 2917) Compare section 422: 53.

59. PED **ton-p-* to appear, occur (13-5-14-15-)

ME *tumpa-* to do (battle), accomplish, fulfill, realize, appear [= Akk. *epēšu*] (TZ1,2,3). See appendix I.

PDr **tōñ-* to appear (A. **tōñ-t-*, B. *tōñ-p-*):

A. Ta. *tōñru* to be visible; appear, seem. Ka. *tōr* to appear, be visible, occur. Pa. *tōnd-* to appear, be got.

B. Kui *tōmba-* to appear, seem. (DED(S,n) 2942)

60. PED **toł-* to perforate, bore (13-5-21-)

ME *tullin* breach, cut, slice [= Akk. *niksu*] (TZ1,2,3). See appendix I.

PDr **toł-* to perforate, bore:

Ta. *toł* id., *tułai* to make a hole, bore, drill, punch [Dr.2]. Te. *tolucu* to bore, perforate. Go. *tullānā* to be bored, pierced. (DED(S,n) 2907)

61. PED **na-mp-* to believe, trust in (14-1-16-15-, Dr.7)

ME *nap(pi)* god, goddess (K). (R)AE *nappi* god (PFT).

PDr **na-(m)p-* to confide, trust, believe:

Ta. *nampu* to long for, desire, trust, believe, have faith in. Ka. *nambu* to confide, trust, believe. Te. *nammu* to believe, trust. Kuwi *nāmali* to believe. (DED(S) 2975) Ta. *navvu* 'to trust' attests the root without the *-m-*.

62. PED **nał* day (14-1-21)

ME *nā*, *nana* day(s) (K), *nāme* day(s) (TZ2,3). (R)AE *nan*, *nanna*, *nanme* day (PFT).

PDr **nāl* day:

Ta. *nāl* day, *nałai* tomorrow. Ka. *nāl* day, time. Te. *nādu* (pl. *nālļu*) id. Go. *nārī* tomorrow. Kur. *nēlā* id. (DED(S) 3025)

The Elamite terms seem to be connected primarily through *nanme*, which would correspond to PDr **nāñmay* (<*nāl* + *may*) 'daytime'. Thus, the final *n* in Elamite and PDr **ł* do not directly correspond. This etymon was suggested by Diakonoff (1967: p. 112).

63. PED **ni* you (14-2, E1.2)

OE *ni* you (K). ME *nu* (K). (R)AE *nu* (PFT). See sections 233.24 and 242.31, and table 2.2 for morphological details. Note rule E1.2, *i* > *u*.

PDr **nī* you (singular):

A basic term attested in all Dravidian languages. (DED(S) 3051, 3055) See section 131.32 and table 1.5 for morphological details.

See section 533 and table 5.3 for a general discussion of the morphology. This etymon was first suggested by Caldwell (1856: p. 44 [1913 (1974): p. 66]).

64. PED **noš-k-* to look at, watch (14-5-11-9-)

(R)AE *nuške-* to guard, keep, protect (PFT).

PSDr **nō-* to look at (A. **nō-kk-*, B. **nō-ł-*):

A. Ta. *nōkku* to see, look at, regard, pay attention to, put in order, protect, save. Ma. *nōkkuka* to look at, view, look after.

B. Ko. *no-ł-* to look at, examine. Ka. *nōdu* to look at, behold, view, look after, examine. Tu. *nōta* sight, view, vision. (DED 3144) Cf. DED(n) 3121,

Ta. *nētu* to seek, look out for; and DED(S) 3011, Ta. *nātu* to seek, inquire after.

The Proto-Dravidian reconstruction of this etymon is somewhat confused due to various augments and vowels being attested. Proto-South-Dravidian easily reconstructs three related variants: **nōkk-*, **nōt-*, and **nēt-*. In addition, PDr **nāt-* 'to seek, examine' can easily be reconstructed. While *-t-* is not normally an augment, *-t(t)-* commonly is; see section 132.14. Given the Elamite forms, much of the confusion can be attributed to the loss of root final **š*. Thus, Pre-Dravidian **nōš-kk/t* > PDr **nōkk-* and **nōt-* with variants in the vowel due to influence of the *š* or other augments. This would claim that in part PDr **t* < **št*, but this is the sole known instance. Note the compensatory lengthening of the vowel in Proto-Dravidian. The verb *nōkk-* is one of the very few roots in South Dravidian with both a long vowel and a geminate consonant. Usually these are in complementary distribution.

65. PED **par* young one (15-1-17)

ME *par* descendants [= Akk. *zēru*] (TZ1, 2,3). See appendix I.

PDr **pār-* young one (A. **pār-pp-*, B. **pār-a*):

A. Ta. *pārppu* young of animals, *pārval* fledgling. Te. *pāpa* infant, babe. Pa. *pāp* child, baby, young animal. (DED(S) 3369)

B. Ka. *pāra* boy. (Den 3369)

66. PED **par-* to look at, watch (15-1-17-)

ME *para-* to supervise, oversee, watch over (TZ2).

PSDr **pār-* to see, look at, examine, look after:

Ta. *pār* id. Ka. *pār* to look for, wait for. Tu. *pāra* guard, custody, keeping. Te. *pāruva* sight, glance. (DED(S) 3366)

67. PED **pari-* to go away (15-1-17-2-)

ME *pari-* to go (K). (R)AE *pari-* to go to, to issue (PFT). See also section 422: 69.

PDr **pari-* to run (away), go away:

Ta. *pari* to run (away), escape. Ka.

pari to run, flow, go away. Te. *parugu* running, a run. Malt. *parce* to run away. (DED(n) 3268) See also section 422: 69.

68. PED **paṭ-* to arrive, happen (15-1-22)

ME *para-* to arrive, come, happen (?) (TZ3).

PDr (?) **pāru-* to grow, become:

Ka. *pāru* to grow, become. Te. *pāru* to grow, become, occur, happen. (DED 3390)

69. PED **paṭi-* to pull, draw, drag (15-1-22-2-)

ME *pari-* to draw, pull, drag, be pulled (K).

PDr **pari-* to pull (out), pluck:

Ta. *pari* to pluck, pull out, pick off. Ka. *pari* to break off, tear. Te. *peruku*, *per(u)ku* to pull out, uproot. Ga. *pay-* to weed, *payk-* to pull out, pluck. (DED(S) 3317)

PDr **pari-* and **pari-* (see section 422: 67) are members of a set of words where homophony and semantic confusion have been common. Other members include **pari-* 'to run away, flow away, fly off', **para-* 'to fly, move quickly' (both DED(S) 3311), and **pari-* 'to separate, be sundered' (DED(S) 3267). Due to the common confusion resulting when these verbs became homonyms, it is often difficult to separate the attested verbs. As a result of this confusion, the correspondences of PED **t* and **r* are not always as expected. Elamite shows some of the same confusion of meanings; note section 422: 67. This etymon was first suggested by I. M. Diakonoff (1967: p. 112).

70. PED **piṭ-* to fix, determine, seize (15-2-12-)

ME *pitte-* to decide, determine, fix, settle; store, deposit, place; register (K); to install oneself, assemble, gather (TZ2); *pitt-* to enclose, shut in (TZ3).

PDr **piṭi* handful, fist, clutch; to catch, grasp:

Ta. *piṭi* to catch, grasp, seize, cling to, contain; a fist, handful. Ka. *piḍi* to seize, catch, grasp, hold, comprise; a seizing, handful, fist, handle. Te. *piḍi* handle, hilt, handful. Pa. *piḍk-* to embrace. Go. *piḍanā* to snatch, catch. (DED(S,n) 3412)

Based on the distribution of the words, the phonological shape, and morphological class, it is clear that the verb is derived from the noun.

The semantics of this etymon are somewhat indirect since the Elamite and Dravidian verbs are not directly cognate. The Dravidian verb is derived from the noun which itself is a derivative of the PED verb, i.e., PED **piṭ-* > PDr **piṭi* 'closed fist' > PDr **piṭi-* 'to catch'. This pattern of derivation is common in Dravidian and confuses the situation considerably; cf. DED(S) 376, PDr **iṭ-* 'to strike': Ta. *iṭu* (*iṭṭ-*) 'to hit against' > *iṭi* 'stroke, blow, thunder' > *iṭi* 'to thunder'.

71. PED **puk-* to enter (refuge) (15-3-9-, El.5)

ME *puktā* help, assistance (TZ2,K). (R)AE *pikti* aid, help (PFT).

PSDr **puk-* to enter, reach (a safe place):

Ta. *puku* (*pukk-*) to reach, attain, enter; commence [archaic and irregular], *pukal* entering; residence; help, refuge, *pukkil* (<*puk* + *il* place, house) abode, place of refuge. Ka. *pugu*, *pogu* to enter. (DED(S) 3481)

The Elamite attestation seems to be a derivative noun from a verb stem attested in Dravidian.

72. PED **peš/c-* to appear, come into existence (15-4-11/10-, Dr.5c)

ME *pipsi-* to create, make (TZ3), *piši* (K). AE *be-* to create (PFT). ME *pipši* is reduplicated.

PCDr **pēy-* to appear, come out, rise (of sun):

Pa. *pēp-* id. Ga. *pēp-* id. Go. *pasītānā* to come or go out. Go(Ka.). *pēy-* to come out. (DED(S) 3594)

Cf. DED(S) 3610, Ta. *pey* 'to rain'. Both of these forms may end in PDr *-*c* instead of *-*y*. They are possibly related to PDr **vay-* 'to put, place; bear, beget' (DED(S,n) 4565) through consonant mutation in Dravidian.

73. PED **peṭa-* to speak (15-4a-22-1-)

ME *pera-* to read, read aloud (K). RAE *bera-* to read (PFT).

PDr **par-*ay to speak, say:

Ta. *parai* to speak, say; word. Kod. *pare-* to utter. Ga. *park-* to say, speak. (DED(S) 3318)

The change from PED **e* to PDr **a* is presumably due to the surrounding consonants.

74. PED **pot* young animal (15-5-13)

AE *putu* lamb (PFT).

PDr **pōt* young (of animal or plant):

Ta. *pōttu* sapling. Te. *bōda* young bird. Kui *podeli* sapling. Kuwi *pōda* girl. (DED(S,n) 3748)

75. PED **muhtā* (young) female (animal) (16-3-7-12-6, E1.7b)

ME *muhti*, *muhtu* offering (?), *muhtirri* young female (animal) (K). AE *muti* female (?), *mutur* woman (PFT). Usually cited with the ideogram MUNUS.

PTaKod **mūṭu* female (animal):

Ta. *mūṭu* ewe, *muṭuku* female elk, *muṭuval* bitch. Kod. *mu-ḍi* girl. (DEDS S806)

76. PED **muc-* to cover, close (16-3-10-, Dr. 5c)

AE *muzzi* vat(s) (PFT).

PDr **mucc-* to cover, close from above:

Ta. *muccu* to cover. Ka. *muccu* to close, shut, cover, *mucce* cover, lid. Kui *musa* to cover, (a drum, etc.), *munja* to be covered, *muspa* to cover, bury. Konda *mus-* to bury, cover (a pit), close (with lid). Kur. *muccnā* to close, shut. Br. *must* shut, closed. (DED(S,n) 4025)

The Kui and Telugu forms with a homorganic nasal (*muñj-*) have been taken as back formations since they are not found elsewhere. Many attestations show *y* or *s* as reflexes of **c*; note rule Dr.5c.

77. PED **vac-i-* to plane, remove, cut off (19-1-10-2-)

ME *massi-* to cut off, cut out, plane (K). (R)AE *mazzi-* to remove, withdraw (PFT).

A. PSDr **vācci* adze:

Ta. *vācci* adze. Ma. *vācci* id., *vāccuka* to cut off slantingly. Ka. *bāci* adze. (DED(n) 4375)

B. PDr **vac-* to pare, cut obliquely:

Tu. *baipini* to chip or pare obliquely.
 Kui *vānja* to chip off, shave down.
 Kur. *basgnā* to peel down. (DED(S,n) 3169) Cf. DED(S) 4382, Te. *vāḍi* sharpness and DED 4405, Ta. *vāl* sword, saw.

78. PED **vari-* to fix, tie, hold (19-1-17-2-)

ME *mari-* to seize, grasp, capture (K).
 (R)AE *marri-* to seize, hold, occupy, *marrip* artisans (PFT).

PDr **vari-* to bind, tie (in a network), fasten:
 Ta. *vari* to bind, tie, fasten, cover, fix; tie bondage, *variccal* reeper of roof. Ma. *variyyuka* to tie in a network. Tu. *bariyuni* to encase a container in a network. Kur. *barndī* ridgebeam of roof (?). (DED(S,n) 4305)

79. PED **viši-* to perish (19-2-11-2-)

ME *miši-* to be ruined, decayed (TZ3,K);
 cf. AE *mišnuka* bad, evil (PFT).

PDr **vī-* (<**viyi*) to perish, cease, die:
 Ta. *vī* to perish, cease, die; destroy.
 Ka. *bī* to end, fail, fade. Go. *vīc* tomb, grave. (DED(S) 4474)

80A. PED **vila-k-* to be transverse (19-2-18-1-9-, El.1b)

AE *laki-* to lie across, *-lakka* across (PFT).

PTaKod **vila(ḡ)k-* to lie across, be transverse; step aside:

Ta. *vilaṅku* id., *vilaku* to withdraw, step aside. Ma. *vilaṅṅuka* to go aside, fall across, cross over, be transverse, *vilaṅṅa* across, athwart. (DED(S) 4450)

80B. PED **vila-t-* to turn aside, divert (19-2-18-1-13-, El.1b)

AE *lati-* to reserve (?) (PFT).

PDr **vila-tt-* to turn aside, divert: Ta. *vilattu* to turn aside, divert, avert, forbid. Te. *vīlu* to be separated, leave. (DED 4450)

The Proto-Dravidian form reconstructs as **vil(a)* 'to be separated' with any of several augments, *-ḡk*, *-k*, *-tt*. The presence or absence of a nasal in the augment *-ḡk* is difficult to ascertain due to the

practice of back formation from *-kk* in early South Dravidian; see section 132.14.

81. PED **vur* place (19-3-17)

ME *muru* basis, stand, holder, support (K), *murta-* to set up, sit, place (TZ2,3,K), *murun* earth (K), *murti* base, pedestal (?) (TZ2). (R)AE *mur* where, place, *murda-* to set in place, dwell, *murun* earth (PFT).

PDr **ūr* (<**vūr*) native place:

Ta. *ūr* native place, village, town, city.
 Ka. *ūr* id. Te. *ūru* village, town, native place. Nk. *ūr* village, town. (DED(S) 643) Br(Sw). *urā* place where one is living.

V. DERIVATIONAL AND MORPHOLOGICAL ETYMA

500. The derivational and morphological etyma present as good a set of correspondences as the lexical one. The great majority of Elamite augments and endings, especially the more basic ones, have a direct and often obvious cognate in Dravidian morphology. Often, however, there have been shifts in the way these morphemes are used, but the magnitude of these shifts is no more than is common within Dravidian proper. Since Proto-Dravidian morphology has not been worked out in detail beyond the initial root syllable, there has been no consistent effort to incorporate these data into the phonology for PED. Nevertheless, they are entirely consistent with the correspondences given in table 3.1. Almost all are straightforward and obvious in any case.

A more complex problem is homophony. It is often not clear whether we are dealing with one, two, or three morphemes of the same form. When there has been any doubt, the multimorpheme solution has been chosen since it maintains the data better and is more readily correctable.

Due primarily to the ease of discussion and needs of presentation, the order of discussion is a circular one. Noun morphology is presented first, beginning with derivational morphemes and working in order down the noun and pronoun. Next, the appellatives, which occur with both nouns and verbs, are discussed. Last comes verbal morphology in the reverse order of the noun, i.e., endings first and derivational morphemes last. Thus, derivational morphology is found at the beginning and end of the chapter and the various personal endings in the middle.

5.1 NOMINAL DERIVATION

510. The morphemes used to derive nouns from various sources in both Elamite and Dravidian are remarkably similar in both form and function. As will be shown below, the two systems of derivation are essentially parallel in all details, and there is no difficulty in reconstructing the PED form.

511. PED **-mai* > PEI **-may* (>*-me*) : PDr **-may*. This morpheme is used to derive abstract nouns from other nouns and occasionally from verbs. These abstract nouns may secondarily become concrete in meaning in individual cases. The meaning is active and productive in Elamite and all of Dravidian where it is the primary formative of abstract nouns. The only etymon with this ending in the corpus is PED **kiṭmai* 'well being' (ME *sitme* 'fortune' : PDr **kirmay* 'excellence'; Ta *ciṛmai* 'renown'); see section 422: 26. Other examples include El *sunkime* 'kingship, kingdom' : *sunki* 'king', Ta *iraimai* 'kingly superiority' : *irai* 'lord' (see section 422: 4), and PDr **orumay* 'oneness, singleness, uniqueness' : *oru* 'one'. See sections 131.14, 233.112, and 242.212 for further discussion and examples. Elamite makes an additional syntactic use of *-me* as an appellative; see sections 242.11 and 243.2.

512. PED **-əN* > PEI **-əN* : PDr **-aN* (*-am/-an*). An ending widely used to derive neuter nouns, both abstract and concrete. However, even when nonconcrete, they are not as abstract as the nouns in PED **-maj*; cf. AE *mušin* 'account', but *mūsimme* 'accounting'. These nouns, while fundamentally nonhuman, can drift into referring to people through occupational designations or names. In the literary Dravidian languages, this form has become the normal means of assimilating neuter loanwords, especially from Sanskrit: Skt *kalyāṇa* 'auspicious, prosperous' > Ta *kaliyāṇam*, Ma *kalyāṇam*, Ka *kalyāṇa* [-*m* regularly lost], Te *kalyāṇamu* 'marriage'. One possible etymon attests this ending, PED **vašəN* 'site, ground' (ME *mašum* 'site, location, ground' : PSDr **vayyam* 'earth, world'); see appendix II, C19. See sections 131.12, 233.114, and 242.214 for other examples and discussion.

513. PED **-tə* > PEI **-tə* (*-da/-te*) : PDr **-tə*. This morpheme forms neuter nouns, but it is difficult to specify it more exactly. The main problem is one of possible homophony. There is clearly a PED **-tə* ending used as a neuter appellative; see section 542.62. The appellative function is clear even in Achaemenid Elamite, cf. *daki* 'other', *dakida* 'other thing' (PFT). However, there is a separate usage (or another form) where **-tə* is a simple neuter formative. In Dravidian this is seen most certainly in the neuter

numerical nouns and nouns such as PDr **paṇri* 'boar' < **pal* 'tooth' + **-tə*. However, these may only be frozen applications of the appellative usage. In Elamite, this morpheme is seen in nouns like OE *nahu(n)te* 'sun', ME *puktə* 'help' (section 422: 71), and perhaps *halat* 'unbaked clay' (appendix II, B2). Some of the Achaemenid forms in *-da* may also be from the case ending **-t*; see section 522.4. In spite of the confusion of forms and usages in **-tə*, it is significant that Elamite and Dravidian usages parallel one another almost exactly in these forms. For other examples and discussion, see sections 131.15, 233.113, and 242.213.

514. PED **(a)š* > PEI **(a)š* : PDr **-ay/*-i*. The status of this morpheme is somewhat more problematical. In Dravidian it is the primary nonmasculine formative and varies between *-ay* and *-i*. This variation may be phonologically conditioned, but in any case, it is complex and poorly understood. This same *-ay/-i* variation occurs widely in Proto-Dravidian; note sections 131.222 and 132.114. The morpheme may have been contaminated in Dravidian by a verbal augment of the same form; see section 552.1. In addition to general neuters, this formative clusters on nonmasculine kinship terminology and on animals; note appendix II, A1 and A2. It is very important (only after PDr **-anrə*) in personal name formation; see the discussion in section 515.0. In Achaemenid Elamite it is extremely common, since *-aš* had become the general formative for borrowing nouns from Old Persian; see Hallock (1969: pp. 9–10) for a somewhat overstated description of this. However, this ending is used for many words not from Old Persian or any other known source. It is particularly the case for animals, work places, occupations, and (personal) names. For Middle Elamite it is much rarer, with only a few good examples such as *araš* 'possession' and *hiš* 'name'. However, it appears fairly commonly in personal and gods' names. The ending *-aš* seems to have been somewhat restricted in Middle Elamite, but was greatly expanded in Achaemenid Elamite. If the Elamite forms in *-i*, such as *sunki* 'king' are included, there are many more examples, but in that case, there are probably two different morphemes involved, i.e., PED **-aš* and PED **-i*.

515. PED **(a)ntə* > PEI **-rə* : PDr **-anrə*. This morpheme is a masculine (human in Elamite) personal formative. It properly and ultimately belongs in the appellative system; see section 542.4. However, the form early and consistently escapes from the restraints of the appellatives to add a more or less straightforward derivative use. It is difficult to make sense of the usage of PED **(a)ntə* or its

reflexes in Elamite and Dravidian without separating it into two related and complementary functions, one morphological and one derivational. Here, only the derivational aspects will be discussed, but even so it shows its origin, occurring only in the singular and consistently, in all attestations, replaced by a personal plural morpheme in the plural.

The phonology is somewhat involved. Proto-Dravidian has **-anrə* for the nominative and **-an* for the oblique. This is still directly attested in conservative Konda. South Dravidian has generalized the oblique and has *-an* for both; see section 131.11. This formative is the basis for most of Dravidian masculine names. Mahadevan (1973: p. 50) reports that 75 per cent of Old Tamil masculine names end in *-an*; the remainder end in *-il-ai* (*-ay*). For Elamite phonology, the reflex follows the normal rules (see rules 14 and 22, table 3.1). The basic pattern is that PEI **r* > *r* and that the nasals commonly drop out of consonant clusters. In Dravidian, Telugu has taken almost exactly the same series of steps: **n̥tə* > **n̥tu* > *n̥tu* > *tu* > [ru].

In its derivational usage, PDr **-anrə* often ends up paired with **-tə*/**-tti* (note section 513) such as PDr **oruvanrə* 'one man' vs. **orutti* 'one woman' and **onrə* 'one thing'; see table 1.7. In South Dravidian, for example, this usage would contrast with the current appellative usage of *-an*, where it consistently contrasts with a feminine ending *-al*. In names, SDr *-an* never pairs with *-al*, but with other, older feminine/nonmasculine endings. In Elamite, *-ir/-ra* occurs occasionally in names, but is not especially common. It does not occur on the one etymon where it might be expected, **att-* 'father' (appendix II, A1), but this is not significant given the special problem of nursery terminology. Based on vocative usage, Dravidian languages regularly drop the final consonants of gender markers for such terms: Ta *appan* 'father', voc. *appā*; *ammāl* 'mother', nom. and voc. *ammā*. Further examples and discussion may be found in sections 131.11, 233.111, and 242.211.

516. Of the five noun formatives occurring in Elamite (note sections 233.11 and 242.21), all are cognate with the five noun formatives reconstructible to Proto-Dravidian (see section 131.1). Of these five pairs, four are directly relatable in phonological form, meaning, and use; only one, AE *-aš* : PDr **-ay*, presents any problem at all. See table 5.1 for a summary of these data.

While both groups have innovated, they have done so in terms relatable to the other. Thus, South Dravidian and Achaemenid Elamite have had massive numbers of loan nouns. While they have used differ-

ent preferred formatives to assimilate these (SDr *-am*, AE *-aš*), they both chose from the inherited inventory of such formatives. Both used the other's preferred pattern as a variant for their own use. Thus, Achaemenid Elamite has loans in *-um* (note *tenum* 'command' < OP) and Tamil has many loans in *-ay* (cf. *vācaṇai* 'fragrance' < Skt.).

This will be the general pattern of cognates between Elamite and Dravidian morphologies. They are genetically related and closely so, showing a pattern of shared features that can be explained only through cognation. The great bulk of their archaic morphologies are obviously cognate. Even where they have clearly innovated, it is in terms that can be related to the other and that often are enlightening about the deeper grammatical structures involved. Dravidian helps Elamite to make up for the documentation that it lacks, while Elamite helps Dravidian to break out of the circularity of areal patterns.

5.2 NOUN MORPHOLOGY

520. The basic morphology of nouns and pronouns in PED seems much closer to Elamite than to any Dravidian language in its overall format. The fundamental pattern is shared by all: noun stem + optional plural + postpositions. However, the complications of base formation so typical of Dravidian languages do not reconstruct for PED. In other words, there is no equivalent of the oblique base that consistently reconstructs, although there are a few isolated examples in the pronouns; see also section 530.2.

521 Plurals

521.0 Plural markers immediately follow the noun stem. Generally, they are consistently used only for humans. Their use for nonhumans is sporadic and restricted to contexts where types rather than mere plurality are meant, or where the plurality is being emphasized.

521.1 The pronominal plural, PED **-m* > PEI **-m* : PDr **-m*. The most basic of the plural morphemes is also the most restricted. Essentially, it is confined to the plurals of the personal pronouns and their direct extensions. In Dravidian, it forms the regular plural of all personal (but not appellative) pronouns and nothing else. This is the only place where it can be reconstructed for Proto-Dravidian; other instances, such as Toda's general plural in *-m*, are either coincidental or a late extension of the pronominal derivative. In Elamite, the ending is obvious in the second person, where *num* is the plural; see sections 233.24, 242.31, and table 2.2. The cor-

TABLE 5.1

Proto-Elamo-Dravidian Noun Derivatives

§	PED > PE1 : PDr	Phon. Rules	Exx.	Sources			See also sections
				131.	233.	242.	
511	-mai > -may : -may	16-1-2, E1.3,6	26	14	112	212	242.11, 243.2
512	-əN > -əN : -aN	6-16	C19	12	114	214	
513	-tə > -tə : -tə	13-6	71, B2	15	113	213	542.62, 553.1
514	-(a)š > -(a)š : -ay/-i	1-11		13	115	215	552.1
515	-(a)ntə > -rə : -anrə	1-14-22-6		11	111	211	542.4

responding third person forms are missing in Elamite since the plural seems to be built on an appellative base, as in Dravidian. In the first person plural it is not obvious. However, one reconstruction would have PE1 **nəNkə*. This hypothesis is supported by the appellative ending in ME *-unkə*, which clearly attests the nasal. The nasal is also found in the Achaemenid Elamite appellative *-un* (and the Dravidian verb ending *-om*). While directly attested only in the second person forms, it can be reasonably reconstructed for the first person, and hence is found in Elamite whenever such forms are attested. The significance of this morpheme is that it is highly restricted in both Elamite and Dravidian and is found in precisely the same locations.

521.2 The appellative plural, PED **-pə* > PE1 **-p* : PDr **-va*. This plural morpheme is basically the plural for the third person appellatives. It is restricted to just that role in most Dravidian languages, where it forms the neuter plural appellative ending. Significantly, in Brahui, the reflex *-f-* of this morpheme is restricted to third person plural forms: *od* 'that', *ofk* 'those'. In Elamite, the appellative system underwent a tremendous expansion in use when it became productive in genitive concord; see section 243.2. With this expansion the appellative plural came to replace all other plural morphemes for nouns, leaving a small remnant only in the personal pronouns. Thus, *-p* is the only general plural in Elamite, and it connects with Dravidian only through the mechanism of the appellatives.

521.3 The other plural morphemes in Dravidian do not seem to have any cognates in Elamite. The human plural PDr **-r* would have fallen together with the masculine in Elamite (PE1 **-rə*). This may be one reason for its lack of attestation. The other

plural morpheme in Dravidian (*-k*, *-ka*, *-kaḷ*, *-lu*; see section 131.21), which is regular in Brahui as *-k*, may be attested in Elamite in the first person plural pronoun *nikə* (<PE1 **nəNkə* ?). Elamite semantics cannot generally be controlled well enough to find clear cases of archaic plurals. See table 5.2 and section 542.71.

522 Postpositions (Cases)

522.0 The so-called cases in both Elamite and Dravidian are merely tightly bound postpositions with no immediately available lexical source. When these are short with a broad categorical meaning, it is more convenient to discuss them in terms of case. When they are longer, more specific and more likely to have lexical sources, the term *postposition* is more appropriate. In any case, it is one phenomenon and one that changes through time; postpositions regularly become cases. These endings are normally added to nouns after the plural morpheme, if any. These forms are discussed in sections 131.22ff., 233.13, 242.22, and tables 1.4 and 2.1.

522.1 The accusative, PED **-n* > PE1 **-n* : PDr **-Vn* (*-an*). The most basic marker of direct objects in Proto-Dravidian is **-Vn*, usually *-an*. Its use is not mandatory with all nouns, especially neuters, but it is normally used with humans. As opposed to some other cases, it has a single purpose. Any other use, such as base to a deverbal postposition, is directly traceable to that function. In Elamite, this ending is restricted to the pronouns, although such pronouns may themselves be added to nouns to mark a specific noun. They are clearly archaic and the only "case" in Elamite according to Reiner (1969: pp. 88-92); see table 2.1.

522.2 The adessive, PED **-əkkə* > PE1 **-ikkə* :

PDr *-kkə. This ending indicates motion toward or location near. In all of Dravidian, except Brahui, it becomes the dative case with the additional function of marking the indirect object. However, it remains a case with varied usage such as experience, motion toward, and location, only part of which can properly be called “dative”; see section 131.223.¹ In Elamite and Brahui, it is an adessive postposition indicating motion toward, location near, and purpose; see table 2.1, section 233.21, and Bray, 1909: pp. 45–46. It is clear that Elamite and Brahui maintain the original system while the rest of Dravidian has innovated its use as an indirect object. Of course, this has tremendous implications for the position of Brahui; see section 536.1 for further discussion.

522.3 The Genitives

522.30 Genitive constructions in both Elamite and Dravidian are relatively involved. Both have at least two and probably three genitive endings. Both employ other morphological means, such as the appellatives in Elamite and noun compounding in Dravidian, to indicate much the same thing. There are and were subtle distinctions made with these forms, but it is difficult to find adequate data to properly trace them diachronically. The two endings discussed here (and a probable third in the following section) are difficult to distinguish. It seems as if the actual speakers got them confused at times; see section 522.33.

522.31 **PED *-a > PEI *-a : PDr *-ā.** The most archaic of the genitive endings in Dravidian is *-ā. For Proto-Dravidian Zvelebil (1972b: pp. 274–275) describes it as a possessive, but it is very hard to define its usage. As -a or -ā, it is widely attested as a genitive ending; see section 131.224 and Zvelebil, 1977: pp. 28–31. It is almost certainly a component in the “pronominal” genitive in -atu. It is also found in South Dravidian pronominal base variants, such as before dative -kku: Ta *eṇakku* ‘to me’, *uṇakku* ‘to you’, *taṇakku* ‘to oneself’, but not in the appellatives, cf. *avaṇukku* ‘to him’. It may also be involved, but probably not as the sole factor, in the “compounding stems” of South Dravidian nouns in -am, -aṇ, -aḷ, and -ar, in which the final consonant is lost: Ta *maram* ‘tree’, *mara-k-kūṭṭam* ‘grove

(tree-group)’. In other words, genitive and genitive-like forms in -ā are widespread and very archaic in Dravidian.

In Elamite, -a (-ya after *i*) is found as an alternate to -inni and -ma in describing what material a thing is made of; see section 242.22 for details and 522.33 for added discussion. Grilhot (1973: pp. 145ff.) connects it with the verbal clitic -a and analyzes it as a general coordinator; see section 242.441 for discussion.

522.32 **PED *-in > PEI *-inni : PDr *-iṇ.** For Dravidian Zvelebil (1972b: pp. 274–275, 1977: p. 31) has labeled this form *adnominal*. It is a good term. This form is used with nouns to indicate a genitive, but not necessarily a possessive relationship. Even in a specific language (Old Tamil is a classic example), it is sometimes very difficult to specify what it does mean. There is a broad, but definable, range of meaning. It has commonly become part of oblique stem formation, particularly for nouns without other distinctive obliques. Nevertheless, it is widely attested throughout Dravidian; sometimes, as in Central Dravidian, with the *n* lost (-i) and sometimes with the vowel lost (-n). It is the most commonly attested of the Proto-Dravidian genitives, but it is not as entrenched in archaic forms as *-ā. In Elamite, -inni parallels -a in use, meaning, and citation, but it may be somewhat more common; see section 242.22.

522.33 **The genitive -na in Achaemenid Elamite.** Grilhot (1973: pp. 145ff.) argues very forcefully that the Achaemenid Elamite genitive in -na is in fact a combination of the genitives -inni and -a. The work here strongly supports her conclusions; see section 242.221. A similar form appears in scattered Dravidian languages (Tulu, Parji, Gondi, and Brahui) from a similar combination of forms. Brahui is enlightening since its form -nā exists only in the singular. For the plural, the regular plural oblique asserts itself in -tā.

522.4 **The locative/oblique, PED *-tə > PEI *-tə (-te) : PDr *-(t)tə.** In Dravidian *-(t)tə functions as an oblique formative, particularly in association with the nominative *-VN (note sections 131.12 and 131.202): Ta *maram*/oblique *marattu* ‘tree’, *viṭu*/ *viṭtu* ‘house’; Ka *marā*/ *maradu* ‘tree’. In Brahui, it functions as the plural oblique marker, in contrast to the singular oblique in -nā and the plural nominative in -k. Besides functioning as an oblique base for other case endings, the oblique alone functions as a genitive with a noun or as a locative with a verb. The locative construction is limited, but quite common in Old Tamil and Malayalam with place names. As a genitive it sometimes contrasts with other genitives or with the

¹ An illustrative parallel to the development of the Proto-Dravidian dative is found in Modern Tamil. Here, a postposition -iṭam, meaning ‘location near’ from a noun meaning ‘place’, has come to function as a dative case. It contrasts with the inherited dative in -ukku in that -ukku is used for permanent situations while -iṭam is used for transitory ones.

TABLE 5.2

Noun Endings (A. Plurals and B. Cases).

	PED	PE1	PDr	Brahui	Section
A. Plurals					
1. Pronominal	-m	-m	-m	-m, -n	521.1, 530.1
2. Appellative	-pə	-p	-va	-f-	521.2
3. Human	?	—	-r	(-r)	542.71
4. Neuter/General	?	?	-(ŋ)kaɭ	-k	521.3
B. Cases					
Nominative	∅	∅	∅	∅	522.0
Accusative	-(V)n	-n	-Vn	-e	522.1
Adessive/ Purposive (Dative)	-əkkə ?	-ikkə ∅	-kkə -kkə	-ki -e	522.2
<u>Genitives:</u>					
1. Possessive	-a	-a	-ā	-ā	522.31
2. Adnominal	-in	-inni	-in	-n(ā)	522.32
3. Oblique/ Locative	-tə	-tə	-(t)tə	-t	522.4

} AE -na 522.33

compounding of nouns, usually to supply a specific definite sense: Ta *marakkompu* 'tree branch, wooden branch', *marattukkompu* 'branch of the tree'.

In Elamite this form is much confused with the appellative and derivational ending *-tə*; note sections 233.113 and 242.213. However, at least for Achaemenid Elamite, Hallock (1969: p. 678) provides a grouping of forms in *-da* (*-te*) which have a locative in time or a genitive sense. Locative examples include AE *hamerda* 'at that time' (: *hamer* 'id.'), *hupimerda* 'id.' (: *hupimer* 'then'), *mellikda* 'for a long time', *mešamerakada* 'in other places' (: *mešameraka* 'elsewhere'). Possibly related examples include *amda* 'presently' (: *am* 'now'), *appukada* 'formerly' (: *appuka* 'id.'), *šaššada* 'id.' Of particular interest is the single example of this morpheme on a pronoun, *nuda* (PFT, PF1860.13), where it appears to be a genitive 'your'; cf. PSDr **niñatu* 'your'. The morpheme **-tə* is not as secure as the preceding ones in form and use. However, it is firm enough to be put forth as a hypothesis.

522.5 When the PED case endings are compared with those of Proto-Dravidian and Elamite (see tables 5.2, 1.4, and 2.1), the true significance becomes apparent. They match as complete paradigms. In Dravidian, all of the unquestionably Proto-Dravidian cases are included, excluding only the late formations: the instrumental and the sociative. Of the included cases, all forms are cognate except the dubious variant accusative in **-ay* and the pronominal genitive **-atu* (but even here, its components are!). All of the basic, securely reconstructible Proto-Dravidian case endings are cognate with Elamite, while none of the rest of the case endings are.

In Elamite, all of the basic archaic endings (*-n*, *-inni*, *-(y)a*, *-tə*) are cognate as well as most of the more basic postpositions. Of these basic postpositions, only the locative *-ma* is not included. Thus PED, Proto-Dravidian, and Proto-Elamite share more than a collection of endings. They share a basic paradigm in which all of the fundamental postpositions are cognate. Note the forms in table 5.2.

5.3 PERSONAL PRONOUNS

530.0 The personal pronouns have long been an enigma in the relationship of Elamite to Dravidian. On the one hand, the second person pronouns provided the morphological detail first recognized as being cognate; see Caldwell, 1856: p. 44. On the other hand, one of them, the first person plural, is still somewhat ambiguous as to its form in PED. For the others, it has been a long quest, fitting together the morphological pieces. The major breakthrough came with the realization that the Proto-Dravidian pro-

nouns were not ultimately archaic, but rather a major innovation in late Pre-Dravidian. The nature of the innovation was the replacement of the nominatives by the oblique stems. Thus, Proto-Dravidian pronouns have little to say directly about the morphology of the nominative bases in PED. However, the same forms, in a different usage, were preserved as personal possessive prefixes in kinship terminology. This was maintained as a system for a few kin terms in Old Tamil and sporadically in many other Dravidian languages. Thus, Dravidian does attest the PED system, but not directly in the paradigm.

530.1 PED personal pronouns took their plurals in **-m*. This is maintained as the regular pattern in Dravidian and the second person plural in Elamite (the first person plural is the only other pronominal plural attested). Except for the possible exception of the first person plural verb endings and the imperative plural ending (see section 553.3), the **-m* plural is found nowhere else in either Dravidian or Elamite; see section 521.1.

530.2 PED personal pronouns took an oblique (non-nominative) base in **-n* (possibly a variant of the genitive in **-in*). For Proto-Dravidian this became generalized and occurs in both the oblique and nominative bases. In Middle Elamite, this ending became restricted in its attested forms to the accusative, which also ended in *-n*. The two *n*'s merged leaving a single *n*, the pronominal accusative, which is Middle Elamite's only true case. In Achaemenid Elamite, which is regionally a different dialect, the *-n* still functions as a distinct oblique, at least in the well attested first person forms; see table 2.2. Besides *un*, the pronominal accusative, Achaemenid Elamite also had *unan* 'me (acc.)' and *unanku* 'id.' (*-ku?*) with separate oblique and accusative *n*'s as well as the possessive in *-na* on the oblique, *unina* 'my'. The third person plural pronoun, *appi*, has *-n* for both the accusative, *appin*, and the genitive, *appini*. Thus, it is safe to reconstruct an oblique in **-ən* separate from the accusative in **-n* for personal pronouns in Proto-Elamite.

The following discussion of pronouns will concentrate on the nominative form, since the obliques are largely predictable. See table 5.3 for the forms of the pronouns under discussion. Given the ambiguities of Brahui's position, its forms will be discussed separately from Proto-Dravidian; see also section 536.1.

531 First Person Singular, PED **i* > PEI **u* : PDr **yāñ/y-* : Brī

531.0 The Elamite forms PEI **u*, ME *u*, AE *u*, acc. *un* show the common, but sporadic, shift of **i* to *u*; see section 311.43. Brahui with nom. *ī*, acc. *kan*,

TABLE 5.3

PED Personal Pronouns and their Reflexes

	Elamite ME [AE] {OE}	Proto- Elamite	PED	Brahui [dial.]	Proto- Dravidian	Old Tamil
1s 'I'						
N	u	u	i/i(k)	ī	yāṇ	yāṇ
O	un	un	iən/ikən	kan	yaṇ	eṇ
P	[u-]	u-	i	-ka	y-	y-
VE	-kə	-kə	-kə	(ut)	-kə	-ku
1p 'we'	{nuku, nika}	nikə	{nəNkə, nikə}	nan	nām	nām
N	nukun	nikən	nikə	nan	nam	nam
O						
P				[-nan]		
VE	-unkə	-un(kə)	-um	(un)	-taṭ	-tum(?)
2s 'you'						
N	nu {ni}	ni	ni	nī	nī(n)	nī
O	nun	nin	nin	nē, n-	nin	nin
P	[-ni]	-ni	ni-	-nē	ñ- (=ny)	ñ-
VE	-ti	-ti	-ti	(us)	-ti	-ti
2p 'you'						
N	num	num	nim	num	nīm	nīm, nīr
O	numun	numən	nim	num	nim	num
P				[-num]		
VE	—			(ure)	-tir	-tir
3 'he, she'						
N	i, ir	i, ir	i	—		
O	i, ir	i, ir	i	ī...-ta		
P	-e	-e	-ta	-ta(n)	t-	t-
Rs 'self'						
N	tu	tu	ta	tēn	tāṇ	tāṇ
O	tun(?)		tan	tēn	taṇ	taṇ
P	[-ta]		-ta	-tēnā		
VE				(e)	-anrə	-aṇ
Rp 'selves'						
N			tam	tēn	tām	tām
O			tam	tēn	tam	tam
P				-tēnā		
VE	-pa			(ur)	-pa	-pa

N, nominative; O, oblique, objective; P, possessive;
VE verb ending. Brahui verb forms are in parentheses.

and poss. *-ka* attests the PED nominative directly. Proto-Dravidian nom. *yāṇ* shows the oblique to nominative shift in Pre-Dravidian. The arguments concern the oblique and the possessive forms.

531.1 The PED pronominal oblique is reconstructed as **-ən*. This is added to the nominative to give **i-ən* → **iən* (**yən*); note rule 2a, table 3.1. In Proto-Elamite the oblique is reregularized by analogy of the nominative and the other obliques to *un*. In Proto-Dravidian (not including Brahui), the oblique **yən* is generalized as the nominative. Automatic morphophonemic rules (Zvelebil's rule, section 122.13) came into play, lengthening the vowel and giving the Proto-Dravidian nominative form **yāṇ*, while **yaṇ* (**yən*) is maintained as the oblique. This alternation of vowel length to differentiate between nominative and oblique bases is unique to the personal pronouns in Dravidian, and on the surface is much more akin to the alternation of form in the numerals; note table 1.7. No appeals to special rules are needed to say that they came from the same underlying form.

531.2 The possessives in Dravidian are restricted to kinship terminology. They are best attested as a system in Old Tamil, where for some words they form a regular system. Examples include OTa *āy* 'mother' (DED(S) 308), *y-āy* 'my mother', *ñ-āy* 'your mother', and *t-āy* 'his/her/its mother'. In later Tamil, and commonly elsewhere in Dravidian, the third person form is generalized: MTa *tāy* 'mother'. Other examples include *ampi* 'younger brother' (DED(S,n) 2513) with OTa *yampi* 'my brother', *ñampi* 'your brother', *tampi* 'his brother' compared with MTa *tampi* 'younger brother'. Examples of relic forms are found widely enough to indicate clearly that the system is Proto-Dravidian: Konda *yāya* 'mother'; Ta, Ma *nampi*, Te *nambi* (<**ñampi*).

Possessive personal pronouns in Elamite regularly follow the noun to which they are attached; see Hallock, 1962: pp. 53–56 and sections 233.221 and 242.31 for discussion. However, the first person form is anomalous. It consists of *u* preceding the noun. This construction and its use are best attested in the Achaemenid inscriptions. Examples include RAE *u attata* 'my father' (from the Behistun inscription and elsewhere), *atta-ta*, see section 535; *u libar-uri* 'my servant' and the conclusive invocative RAE *u uramasda un nušgišni* 'may₄ my₁ Ahuramazda₂ protect₄ me₃'.² While *u uramasda* could mean 'I [am] Ahuramazda', it would not make sense here

and furthermore would be blasphemous for a Zoroastrian. Hence, here *u* must mean 'my' and without the supporting suffix (*-uri* or *-ta*).

The construction of PDr **y-āy* 'my mother' and RAE *u attata* are parallel in their prefixing the basic element for the first person, as reconstructed for PED. Thus the personal possessive pronoun **i-* can be reconstructed for PED as well as a Dravidian form supporting the PED nominative in **i*, i.e., there is a more basic morpheme than **yāṇ* in Proto-Dravidian for the first person. By implication, this system exists for all persons in the personal pronouns.

532 First Person Plural, PED **nəNKə* > PEI

**nikə* : PDr **nām* : Br *nan*

532.0 These pronouns present a problem due to extensive changes in both Elamite and Dravidian. Proto-Dravidian has two first person plural pronouns, an inclusive one, **nām* (obl. **nam*) which attests the PED form, and an exclusive one, **yām* (obl. **yam*) which was analogically created by pluralizing the singular. Brahui has a single plural pronoun *nan* (obl. *nan*). The Proto-Elamite form **nikə* can be related to the Dravidian and Elamite ones through a form PED **nəNKə* > **nəkə* > *nikə*, *nuku*. The loss of the nasal in a cluster is regular in Elamite; see rule 16, table 3.1. The vowel alternation is not exceptional. That the plural is in fact **nəNKə* is supported by the corresponding verb ending, which is *-un/-unkə* and shows both the nasal and the separability of the *-kə*. It is unclear just what this *-kə* may be. It could be a reinforcement of the form of the first person appellative ending *-kə*, it could be the cognate of the Proto-Dravidian plural **-kə* preserved in this isolated case (see section 521.3), or it could be some unknown morph. The first hypothesis is the most likely since it makes use of a known morpheme. It may have been added to help distinguish the first person pronoun from the second person plural **num*. For an alternate hypothesis see section 536.12.

532.1 The oblique is again PED **-ən*. This is preserved in ME *nukun* (but note the genitive AE *nukami* showing *-m* in table 2.2). Proto-Dravidian regularly assimilated **-ən* to the preceding **-m*, giving a single **-m* for both the oblique and nominative. The alternate hypothesis would have the oblique in **-m* as original in PED and the Elamite forms with an *-n* in the accusative would be an analogical extension of the oblique in the singular.

533 Second Person Singular, PED **ni* > PEI

**ni* : PDr **ni(n)* : Br *nī*

533.0 This pronoun requires little comment. The nature of the correspondence is obvious. PEI **ni* (OE *ni*) becomes *nu* in Middle and Achaemenid Elamite.

² The word 'my' is not in the parallel Old Persian and Akkadian versions of this text. However, there can be little doubt of its meaning. See Paper, 1955: p. 74 and Hallock, 1969: p. 671 (PFT) for the exact citations.

Proto-Dravidian may or may not have added the final **-ŋ* from the oblique. Major groups attest it both ways; it was probably variable in Proto-Dravidian itself. The major observation on the oblique is that it is universally without an epenthetic vowel, i.e., **-ŋ* instead of **-ən*; thus, PED **nin* > PEI **nin* (>*nun*) : PDr **niŋ* : Br *nē/n-*.

533.1 The same form, PED **-ni* (perhaps **ni*), reconstructs as the possessive clitic for the second person. This is attested as AE *-ni*, Ta *ñ-* (<**ny* < **ni*), and Brahui *-nē*; see section 531.1 for discussion.

534 Second Person Plural, PED **nim* > PEI
num* (nim?*) : PDr **niŋ* : Br *num*

534.0 This pronoun is precisely the expected counterpart of PED **ni* 'you'. The plural is in **-m*, the labiality of which encourages the *i* to become *u*; note Proto-Elamite and Brahui *num* and the Tamil oblique *um*. Only Middle Elamite attests the oblique (or accusative) in *-n*. Probably the oblique is PED **nim* (**nimən* ?) > PEI **num(ən)* : PDr **niŋ* : Br *num*. These second person pronouns establish and exemplify the PED pattern for personal pronouns.

535 Resumptive Pronouns, PED **ta(n)* > PEI
**tə(n)* : PDr **tāŋ* : Br *tēn*

535.1 Most third person constructions in Dravidian are handled by appellative rather than personal pronouns. The only exception is the resumptive (also called the reflexive) pronoun PDr **tāŋ* (obl. **taŋ*), which is used when the subject of a sentence is repeated in that sentence. In Elamite only Achaemenid Elamite has meaning well enough controlled to comprehend the meaning of such a form, and there are three likely reflexes.

532.2 First of all there is the possessive personal pronoun enclitic *-ta*. This occurs only in Achaemenid Elamite in the often repeated phrase *u attata* 'my father'. This contrasts with *atteri* 'his father', making it clear that the suffix is *-ta*. Hallock (1962: pp. 53–56) takes *-ta* as a variant of *-uri* 'my' on the basis of this translation. However, much better morphological sense is made if *-ta* is connected with the Dravidian resumptives, in which case it would mean 'own' and *u attata* would be literally 'my own father'. This also explains why *-ta* is restricted to this one word and is not used in cases like RAE *u libaruri* 'my servant'. Thus *-ta* can be taken as related to the Dravidian resumptives; see section 536.1 for further discussion.

535.3 Reflexives

535.31 Second, there is the form AE *tanna* (var. *tinna*), which Hallock tentatively reads as 'whole',

found in the formula d.ITU.lg *tan-na* 'monthly' (PFT). This can be readily reinterpreted as '[in] the month itself = in each month = monthly', with a connection to PDr **tāŋ*.

535.32 Closely related to the above is RAE *dun* which is attested in the Behistun inscription as 'one's self'. It seems to be closely related to AE *du*, whose meaning is somewhat ambiguous. However, AE *due* (*du* + *e* 'his') clearly means 'his own'; see Hallock, 1965: p. 552. I think that here we have the missing resumptive pronoun for Elamite. It has the proper morphology to be an Elamite pronoun. Also note the Brahui reflexive pronoun *tēn*.

536 Third Person, PED **i* > PEI **i* : Br *ī-*

536.0 Except for Brahui, no Dravidian language has a clear reflex of this form, although it may have fallen together with the deictic base **hih*. Elamite and Brahui share a third person pronoun base *i-*. In Elamite *i* is neuter and *ir* with the animate ending is human. With a spelling *e* (AE *-eri* with human nouns), it is the possessive enclitic; *hiše* 'his/her/its name' (: *hiš* 'name'). It functions as a singular resumptive pronoun, but its total function is unclear; see Reiner, 1969: pp. 90–92. However, it is a third person form, a pronoun, and its base is *i*.

536.01 Brahui has a third person pronoun base *ī-*. It is not used in the nominative, where a deictic pronoun or a repetition of the noun is used instead. Neither is it used in the objective (accusative + dative) nor genitive cases where the pronominal clitic is used alone. This use of the pronominal enclitic, following a noun as a genitive and a verb as an objective, is also regular for the first person *-ka* and second person *-nē*. For all remaining cases and postpositions, the initial base *ī-* must be used. It always co-occurs with the third person pronominal enclitics (*-ta* singular, *-tā* plural). This enclitic follows the case ending or postposition, giving these forms a fore and aft structure with pronominal proclitics and enclitics used simultaneously: *ī-ki-ta* 'for him/her', *ī-to-tā* 'with them'. This, of course, is the same structure so peculiar to certain Elamite postpositional constructions; see Reiner, 1969: p. 98 and section 242.311 for details. Thus, Brahui and Elamite share not only the third person pronoun, but also a most striking and idiosyncratic pattern of pronominal elements surrounding a postposition.

536.1 Position of Brahui. Up to this point the conventional wisdom that Brahui is a Dravidian language has been maintained, although often as a rather thin façade. As has become increasingly obvious, Brahui shares many points with Elamite that it does not share with the Dravidian languages,

properly speaking. At the moment it is not clear which of three possibilities accurately describes Brahui's position. While not a member of a subgroup, Brahui may still be a Dravidian language in the sense that it is the first branch off. In this case, there are good reasons in the phonology (see below) for grouping and labeling the rest of them as *Dravidian* and labeling the protolanguage as *Braho-Dravidian* or some such title. Brahui may be more closely related to Elamite, in which case an *Elamo-Brahui* stage would have to be set up. It seems most likely, however, that Brahui is the third separate branch of Proto-Elamo-Dravidian (perhaps more appropriately labeled *Zagrosian* in this case; see McAlpin, 1975a: p. 109). This helps explain some of the anomalies in Brahui's structure, such as agreeing with Dravidian on phonology and with Elamite on pronominal morphology. If this hypothesis is true, then Brahui constitutes direct evidence for the structure of PED and certain forms will have to be adjusted.

536.11 The current evidence on the grouping of Brahui can be summarized as follows (*Dravidian* does not include Brahui here):

(1) In phonology, Brahui agrees with Dravidian in the one major complex shift from PED to Proto-Dravidian, i.e., the shift of *š to *t, θ, and *y in a specific and detailed pattern; see rule 11, table 3.1. Brahui agrees with this Dravidian pattern in all well attested instances (see the entries in sections 422: 46, 50, 51, 53). However, in a more dubious example (see appendix II, B7), Brahui has *s* where Elamite has *š* and Dravidian has both *t* and *θ*. Brahui agrees with Elamite in maintaining *h* as a fully functional phoneme, whereas if it exists in Proto-Dravidian at all, it is highly restricted and primarily a morpho-phoneme; see section 312. Looking at the phonological side of the balance sheet, Brahui agrees with Dravidian languages in innovations and with Elamite in retentions, and thus, on these grounds seems closer to Dravidian.

(2) In noun morphology, Brahui agrees with Dravidian on the use and distribution of the appellative plural in *-p; see section 521.2. For Brahui and Proto-Dravidian, this plural is relatively restricted in use rather than generalized as in Elamite. On the other hand, Brahui agrees with Elamite on the use of the adessive in *-akkā (section 522.2) and does not share in the Dravidian innovation which makes this ending into a general dative. This form is a dative in all Dravidian languages. In those Dravidian languages which have collapsed accusative and dative functions into a single ending, it is the dative's morphology

which is dominant, i.e., the form always has a velar. In Brahui, the unified objective case has -e as an ending and there is a separate purposive in -ki. Thus, it is not a matter of merger in Brahui, but of the adessive never having become a dative. This is precisely the situation in Elamite.

(3) It is in the pronouns, however, that the clearest evidence of the position of Brahui comes to the fore. First, Brahui and Elamite share a third person pronoun *i-* which Dravidian does not have; see section 536.01.³ Second, Brahui and Elamite share in having personal possessive pronominal enclitics not found in Dravidian; see section 131.34. Since the unique genitive *u* in Elamite tends to indicate that the Dravidian proclitics are more original, this may be a shared innovation between Elamite and Brahui. On the other hand, it may be an areally induced innovation in Brahui (and Elamite). Such constructions are certainly common in the area now; see Emeneau, 1962: pp. 45–77. However, the forms are very similar; see table 5.3. These endings are:

	AE ⁴	Brahui	PED
1s	u- . . . (-ta)	-ka	*i
2	-ni	-nē	*ni
3s	-e	-ta	
3p	-pie	-tā	
R	-ta	-tēnā	*ta

The first person form in Brahui -ka is, of course, the same as the first person appellative ending in Elamite; see also section 542.1. The overall similarity of form is obvious, AE *u attata* 'my own father' compared to Br *bava-ta* 'his father'. The reflexive -ta in Elamite corresponds to the third person form in Brahui.

Brahui and Elamite share the two-part pronouns in the third person. Brahui agrees with Elamite item for item, point for point in its pronoun system while it agrees with Dravidian less well than it does with PED.

The main point, however, is the argument that can be made for the Proto-Dravidian pronominal system as an innovation. All Dravidian languages agree absolutely in reconstructing personal pronouns with singulars in *-n and plurals in *-m, nominative

³ Emeneau (1961, 1962: pp. 95–96, 1968: DEDS 351) suggests connecting this *i* with the deictic base PDr *iH-. However, as he points out, there are serious problems with the morphology in this attempt.

⁴ Other forms found in Achaemenid Elamite, such as -uri, -eri, etc. are obviously the result of fusion with originally genitive appellatives; see section 242.11 for the Middle Elamite forms.

with a long vowel and oblique with a short one. Brahui has never fit into this system, and previous attempts have never been satisfactory. The points which have been stressed as similarities are the very ones shared by Elamite and common to PED. The simplest explanation of the Proto-Dravidian regularity and similarity of form with Elamite and Brahui is that Proto-Dravidian generalized the oblique as the nominative.⁵ This would be a major morphological innovation not shared by Brahui.

536.12 Thus, Brahui cannot be a Dravidian language in the strict sense. It maintains a system much closer to that of PED. If we grant Brahui essentially equal status in attesting PED morphology,⁶ several points made earlier may have to be modified. The major point is the first person oblique in Brahui, *kan*. If this is not a spread in usage of the form attested in the Elamite appellatives (*-ka*), then the PED first person pronoun may be nom. **i(k)*, obl. **ikan*. This possibility, at first unlikely seeming, does solve several problems. One, it provides a connection between the personal pronouns and the appellatives in *-ka*. Two, it explains the anomaly in Brahui of the initial *k* of *kan*, since **k-* properly goes to *x* here. Three, it helps explain the Proto-Elamite first person plural pronoun **nikə*, in that the forms would vary from the singular only by an initial *n-*, paralleling PDr **yān*, **nām*. If this hypothesis is true, then PED **ikan* > **iyan* > PDr **yañ* fits into a well attested pattern in Dravidian. Medial lax *-k-* is notoriously unstable and would tend to *y* after *i*; cf. Ta *ika*, *iya* 'to go beyond'. Also it explains the vowel *ə* before *n* in the first and third persons (after consonants), but not in the second person (after a vowel). The seriousness of this hypothesis depends on the weight given to Br *kan*. This in turn depends on the grouping of Brahui. At the moment, assuming that Brahui is more closely connected to Dravidian than Elamite best fits the data. The positioning of Brahui will depend on a great deal of further research, which is beyond the scope of the current work; see figure 2.

537. The series of pronoun forms presented here

⁵ There is a striking parallel with the replacement of the nominative in the third person appellative **-anrə* by the oblique in **-an* in Proto-South-Dravidian. See sections 131.11 and 515.

⁶ In other words, it is clear that Brahui is either first branch off on the Dravidian side, first branch off on the Elamite side, or an independent third branch; see figure 2. However, even if it is not independent, its data feed in at such a high level that for practical purposes the hypothesis of its independence is the most practical one. It remains a working hypothesis, however, until Brahui's status is clarified.

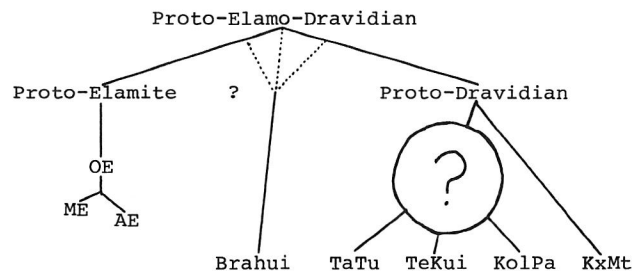


FIG. 2

is not random. It would not be terribly significant if in the second person, the base form of **ni*, the plural in **-m*, or the oblique in **-n* could be established individually. Too many languages share any given monosyllabic or monophonemic morpheme. However, it becomes very significant when all three co-occur and shift together in Elamite, Brahui, and Proto-Dravidian. One morpheme is chance, two is a trend, and three is a firm case for cognation. Taken together with the other personal pronouns, where the same pattern is repeated (with some adaptations and inconsistencies), it is clear that there is a paradigm here. Even when the exact form cannot be specified due to competing models, there is still obviously a pattern of a specific and detailed nature. This tentative paradigm (in part, set of paradigms) is given in table 5.3. The overall similarity is obvious.

5.4 APPELLATIVES

540. Appellatives are formed by adding personal endings to any word except a fully finite verb; see section 030 for a general discussion. They play an important and varied role in the grammars of both Elamite and Dravidian. Sections 131.4 and 242.1 give some of the usages, and a system of appellatives can readily be reconstructed for PED. The following discussion will concentrate on the forms which typically are used as bases for appellatives and on the appellative endings themselves.

541 Appellative Bases

541.0 A small group of nouns are normally used only as the base for an appellative. Their sole non-appellative use is as a compounding base which functions as a type of modifier; see section 130.31 and Zvelebil (1977: pp. 59–67) for a discussion of this type of construction in Dravidian. The functions to which this small group seems restricted are the deictic-interrogatives, the numerals, and the colors (attested only in Dravidian). Of these, only the deictic-

interrogatives and the numeral 'one' are reconstructible to PED.

541.1 Deictic-Interrogatives

541.10 Definitely in Dravidian and Brahui and seemingly so in Elamite, the interrogatives for information (wh- questions) pattern completely with the deictics. As a result, it is easier, and in no way confusing, to use the term *deictic* to refer to both phenomena. Thus, these interrogatives for information will be handled and labeled as the interrogative deictic.

These deictics form a tight, consistent, and atypical set. They all have the same phonological shape, differing primarily in their vowel. They consist of monosyllabic morphemes ending in **-h*. Initially, they have a glide (**h, *i*) or no consonant at all. The single vowel is varied to indicate the meaning, and they become almost a travesty on the tendency for languages to indicate deixis by vowel contrast (this vs. that, etc.). For Proto-Dravidian these deictics form the great bulk of the examples of **H*; only **caH-* 'to die' is a clear additional example; see sections 312.0 and 422: 30. Also in Dravidian, the vowel length is variable, but seems to be fundamentally short. The PED forms and evidence for these words are given in entries A3–A6 in appendix II. The discussion here will concentrate on the general shared pattern.

541.11 There is no problem with the deictic for 'here' which is invariably attested with the vowel *i*; PED **(h)ih* > PEI **hih* : PDr **iH*. However, Dravidian and Elamite disagree on the preferred contrast. For 'that' Dravidian uses a form with *a* and Elamite uses one with *u*. However, both do attest the other variant. So, Proto-Dravidian clearly reconstructs **aH* for moderately distant deixis (in sight) and **uH* (or **oH?*) for far distant deixis (or out of sight). Similarly, Elamite attests many words with *a(h)-* as a bound morpheme. This is in addition to the common word for 'that' *huh(pe)*. Their equivalence is best exemplified in the Achaemenid synonymous pair, *hupimer* and *hamer* 'at that time' (PFT). Thus, both PED **ah* (>PEI **ah* : PDr **aH*) and PED **huh* (>PEI **huh* : PDr **uH*) can readily be reconstructed.

541.12 The interrogative is attested throughout Dravidian with the rare initial *y-*, as in PDr **yaH*. The loss of this semivowel in Elamite (note table 3.1, rule 2a) would have allowed it to fall together in form with the deictic in *a*. This may be part of the reason for the decline in usage of this deictic in

Elamite. In any case, this interrogative form (PED **iah* > PEI **a(?)* : PDr **yaH*) is attested in the interrogative and universal bases *akka* and *appa* in Elamite; see appendix II, A6.

541.2 Numerals

541.20 Elamite attestation of numerals is very limited since figures were used in almost all cases higher than 'one'. Attested forms in Achaemenid Elamite consist of *ki* 'one' and possibly *atbazaš* 'three', along with *unra* and *lurika* which mean 'each'. The word *ki* is also found in Middle Elamite. Since AE *atbazaš* is clearly not cognate with PDr **mūn* 'three', all possible connections are concerned with the Dravidian words for 'one'.

541.21 The Dravidian forms for 'one' are unusually complex; there are up to five related variants of the root. The *Dravidian Etymological Dictionary* (DED 834) gives *oru/ōr* 'one (as attribute)', *okka* 'single', *oṇṭa* 'one, alone, odd', and *oṇru* 'one thing'. These simplify to PDr **ōr*, **okkə*, and **oṇ* (>*oṇ*). Andronov (1976a: pp. 5–6) indicates that the word *ollu* 'to unite' (DED(S) 846) is related. This gives **ol* as another variant underlying **oṇ*, i.e., **ol* + **tə* > **oṇrə* by normal assimilation. Emeneau (1957: p. 4 [1967a: pp. 141–142]) argues convincingly that although the form *ōr* is the most common variant, it is, in fact, influenced by **īr* 'two' and is a late development in Pre-Dravidian. However, **okkə* remains unexplained and is the common stem for 'one' in Central Dravidian. Thus, the best arguments are for PDr **oṇ*, which may or may not be a variant of **ol*, and for a slightly different meaning ('single' or 'together' ?) in PDr **okkə*. In this view, **ōr* would be a relatively late development and is not directly attested in Brahui *asi* (<**oṇrə* ?) 'one'.

541.22 In spite of the difficulties in Elamite citation, there are three variants for 'one' citable, which correspond one for one with the three archaic forms in Proto-Dravidian, viz. **okkə*, **oṇ*, and **ol*. In two of these the Elamite rule for the loss of initial short vowels applies (see table 3.2, rule El.1), resulting in the loss of the **u* (<**o*). AE *unra* 'each' is identified by Hallock (PFT) as *un* 'one' and *ra*. This is clearly cognate with PDr **oṇrə* 'one thing' (DED(S,n) 834d); see section 422: 13 for details and discussion. AE *lurika* 'each, singly, single' (PFT) is composed of an initial unit *lu-*. This is possibly cognate with PDr **ol*. PEI **ki* 'one', *kir* 'one man', is probably cognate with PDr **okkə* (DED(S,n) 834b). However, since the correspondence depends on a single consonant, it has not been included in the

etymological discussion. However, the observation is not a new one. Caldwell (1856: p. 44 [1913: p. 66]) makes explicit reference to it.

542 Appellative Personal Endings

542.0 The appellative endings for PED can be reconstructed as a system, or more properly speaking, as a system for verbals and a collection of endings for other purposes. These forms have been collected in table 5.4. While the PED appellatives remain as appellatives in Middle Elamite (see table 2.4 and section 242.1), in Achaemenid Elamite (note section 233.31) and Proto-Dravidian (sections 132.41, 132.42) they become part of the verb.

542.1 First person singular, PED **-kə* > PEI **-kə* : PDr **-kə*. These forms require little comment. There is a close and obvious relationship between the endings of the Middle Elamite "nominal conjugation" (Hallock's Conjugations II and III) and the nonpast verbal paradigm of Proto-Dravidian; see sections 132.4 and McAlpin, 1975a: pp. 105–107. Allowing for the vagaries of phonology and attestation, they have the same form, *-kə*, which certainly reconstructs for PED. The Brahui reflexes are a little less direct. The most likely candidate is *-v* from the Present Indefinite. However, the more striking parallels are to be found in the personal pronouns where Brahui has a first person singular oblique in *kan* and a possessive clitic in *-ka*; see table 5.3. These are

TABLE 5.4

PED Appellative System and its Reflexes

	PED	Proto-Elamite	Proto-Dravidian	Brahui	Section
<u>Verbal</u>					
1s	-kə	-kə	-kə	-v	542.1
1p	-un	-un(kə)	-kum	-n	542.2
2s	-ti	-tə	-ti	-s	542.3
2p	?		-tir	-re	542.71
3s	-(a)n ₂ tə	-rə	-an ₂ rə		542.4
3p	-pə	-p(ə)	-pa		542.5
3n	-∅	-∅	-∅	-∅	542.61
<u>Other</u>					
	-tə	-tə	-tə		542.62
	-mai	-may (>-me)	(-may ?)		542.62
	?		-ar	-r	542.71
	-ət	-ut	-ət	-t	542.72

probably from parallel rather than strictly reflex morphology, but they show the pervasive influence of the appellative as a model in PED.

542.2 First person plural, PED *-uN > PEI *-un(kə) : PDr *(k)um. These forms are somewhat more complicated. They tend to occur with reinforcements adapted from the singular in *-kə; ME *-unka* with the singular following and PDr **-kum* with it preceding. Analogy plays a role in both of these forms. Achaemenid Elamite *-un* and Brahui *-n* do not show evidence for the extra form. It is possible that the Proto-Dravidian imperative plural **-um* is also related; see section 553.3. In this case, the PED form would clearly be **-uN*. Other evidence for the independent existence of **-uN* is the first person inclusive ending PDr **-tum*; see table 1.9.

542.3 Second person, PED *-ti > PEI *-tə : PDr *-ti. The second person singular forms are obvious and require little comment. Brahui has *-s* which may be from **-ti*, but the matter is far from certain. There is no plural attestation in Elamite at all. Proto-Dravidian and Brahui give evidence for a plural in *-r*, but this awaits clarification of the position of Brahui before its relevance can be evaluated.

The type of detail that is most convincing for the cognation of Elamite and Dravidian is illustrated by these second person forms. Both groups of languages attest and reconstruct pronouns in *ni*, obliques in *nin*, plurals in *nim*, and endings in *-ti*. This consistent, essentially arbitrary, type of detail can be explained only on the basis that these languages are cognate.

542.4 Third person singular (human/masculine), PED *-(a)ntə > PEI *-rə : PDr *-anrə. While phonologically involved, the correspondences are straightforward. Note the assimilation and nasal loss in Elamite; see table 3.1, rules 14 and 22. In Dravidian this ending is masculine, while in Elamite it is human. The masculine ending is probably the more original, but the matter is uncertain. Note that in all instances this ending is replaced in the plural by the corresponding plural morpheme. Brahui, which has collapsed all third person forms into a single category, does not attest this ending. Compare the same form in a related derivative usage in section 515.

542.5 Third person plural, PED *-pə > PEI *-p(ə) : PDr *-pa (>-va). The phonological correspondences are uncomplicated, but there has been a significant shift in usage in the attesting languages. Brahui probably has the original distribution as an appellative general plural. This is not found in the verb and is attested only in the pronouns as *-f-*; see section 521.2. In Dravidian, through the mechanism of the appellative pronouns, it has become a common neuter

plural. However, it remains as a general plural in verb morphology; see sections 132.41, 132.42, and table 1.9. In Elamite, through a general expansion of the use of appellatives in noun morphology, it has become the primary plural ending; see section 521.2. However, the core usage as an appellative plural remains clearly discernible.

542.6 Neuter Appellatives

542.60 Even in PED it is clear that the neuter appellative endings split into two categories: one, a null ending (Ø) was used with verbals and the other, **-tə*, used with nouns. It is possible that the latter more properly goes with noun derivation; see section 513.

542.61 The verbal neuter appellative, PED Ø > PEI Ø : PDr Ø. While it is always dangerous to argue from negative evidence, there is a consistent pattern of neuters taking no ending when parallel to the foregoing appellative forms. This is further reinforced by Brahui, which has zero (Ø) as the third person singular ending in the Present Indefinite (and commonly, in general). It seems likely that this was the situation in PED as well.

542.62 Neuter formatives paralleling the appellatives. PED **-tə* (section 513) and **-mai* (section 511) are noun formatives closely paralleling the true appellatives. In this they contrast with **-(a)ntə*, which is both a formative (section 515) and an appellative (section 525.4). PED **-(a)ntə* probably provided the model for linking the two systems. Neither PED **-tə* nor **-mai* have any regular usage with verbals and are not attested as doing so; note tables 1.8, 2.3, and 2.4. However, while not in the verb in Proto-Dravidian (which is a reflex of the PED appellative), **-tə* is clearly basic and productive for verbals in Proto-Dravidian's own appellative system; note the neuter forms in table 1.9. PED **-mai* undergoes a similar expansion in Middle Elamite and becomes crucial in the genitive formation; see column B of table 2.4. Thus, these forms are best seen as noun formatives paralleling the appellatives in PED and available to expand its functions, particularly considering that there is no neuter ending in the original system.

542.7 Other Appellatives and Parallel Forms

542.71 PED *-r (?). Brahui and Proto-Dravidian have clear attestations of human plurals in *-r* for both second and third persons. These are found in both the verbal and appellative systems for these languages. If Brahui is truly independent evidence for these

forms, then they should be reconstructed for PED. However, Elamite has no evidence for this plural. See also section 521.3 on the plural ending.

542.72 PED **-ət* > PEI **ut* : PDr **-ət* : *-t*. This ending was discussed as a clitic in Achaemenid Elamite, where it seemed to be an emphatic which clustered on both first person and plural forms; see section 233.321. The same unusual pairing of meanings, a sort of wild card in the morphology, is to be found in Dravidian. It is not clear if PED **-ət* should be described as an appellative ending (first person plural inclusive) that came to be used elsewhere, or as a clitic that became attached to first person and plural forms, especially to first person plurals.

Reflexes of PDr **-ət* are attested in several places in Dravidian morphology. The first and most obvious is the ending in *-ət* seen on the first person plural inclusive endings in the verbal nonpast; see table 1.9. Even here however, it is not consistently attested and must be reconstructed as an alternative to **-um*. PDr **-ət* is also to be regularly found in the imperative plural ending of Telugu-Kui (especially Telugu and Gondi), which has the underlying form of PTeKui **-um-ət*; see Subrahmanyam, 1971: pp. 494–497. This is the origin of the stop in the Modern Telugu honorific *-aṇḍi*. Note that in Gondi the *-t* has worked its way into the second person plural pronouns (*nimet*, etc.) and into the regular personal endings; see the Gondi forms in tables 1.9 and 1.10. In other words, for Gondi it has become the second person plural marker. The ending *-t* also appears in Brahui, but here it is the first person singular ending in complementary distribution with *-v* by tense, hence *kunguṭ* 'I ate'. Except for the observation that it is either first person, plural, or both, there is no good explanation of its distribution or use. This exactly parallels the ambiguities in its Elamite usages.

543. As has become evident in the foregoing discussion, PED had a paradigm of appellatives. This is especially clear in cases where the appellatives were formed on a verbal base and functioned as predicates. This appellative paradigm survived intact in Middle Elamite as the "nominal conjugation" (column A of table 2.4). It is seen in a somewhat degenerate form in Achaemenid Elamite as Hallock's Conjugations II and III; see table 2.3. In Proto-Dravidian, the PED appellative paradigm survived intact as the verbal nonpast (table 1.9). This survival as a complete system is attested in Old Tamil, Konda, and in the female varieties of Kurux (Kurux has separate male and female speech with separate morphologies). However, Proto-Dravidian had innovated a new set of

appellatives modeled on the personal pronouns which themselves had been an innovation in late Pre-Dravidian. Thus, the PED appellative corresponds to the Proto-Dravidian verb (in part), rather than to the Proto-Dravidian appellatives. These last share more connections to the PED noun derivative system, although not as a coherent system. Brahui seems to preserve aspects of the PED appellative in its Present Indefinite verb endings, but the morphology is so degenerate that it is difficult to be sure. In any case, there is no problem with the Brahui data.

5.5 VERBAL MORPHOLOGY

550. If we leave aside verbal forms with appellative endings, there is noticeably less structure to a discussion of PED morphology than has previously been the case. There is only one possible paradigm (the Elamite true verb) as a source, and it does not seem to be cognate as a paradigm in Dravidian. We are left with a group of endings and words which are almost certainly cognate, but it is more difficult to demonstrate the case without an overarching framework.

This discussion is ordered in the reverse of that of the substantives. It begins with the end of the verb and proceeds backwards to the root. The order of forms in Elamite is the primary criterion.

551 Auxiliaries

551.0 Middle Elamite makes use of a number of auxiliary morphemes in its verbal morphology. The primary ones are the *-ma-* forms and the negative *ani*; see sections 233.31, 242.412, and 242.513. These correspond precisely with normal auxiliary forms in Dravidian languages. They are reconstructible to PED as verbs, which if not PED auxiliaries, at least had a semantic range which would have easily allowed them to become so in the attesting languages. Two of the most common Dravidian auxiliaries, the two verbs for 'to be', do not function as auxiliaries in Elamite, but are cognate as regular words; see sections 422: 20 and 42.

551.1 PED **man* > PEI **man* : PDr **mannə* 'to become'. The *m-* conjugations in Achaemenid Elamite and the corresponding *-ma-* forms of Middle Elamite (see section 242.412) are fairly obviously the result of an auxiliary verb. More precisely, they are the result of the fusion of a periphrastic verb onto the main verbal stem. The semantics are complex, but the two core ideas seem to be concerned with plurality of action and with duration, summarized as an iterative-durative; see section 233.312 and Hal-

lock, 1959: pp. 7–8, 13–18. Such semantics are easily reconcilable with a verb meaning ‘become’. The verb PDr **maṇṇā* ‘to become’ is widespread, particularly in Central and North Dravidian, where it is a common auxiliary. The most striking parallelism is the Present Tense of Kui, which consists of a converbial followed by *man-* ‘to be, become’ as an auxiliary, precisely the same as the construction in Elamite; see Subrahmanyam, 1971: p. 277 and Winfield, 1928: pp. 85–87. In South Dravidian, this verb survives as a lexical verb meaning ‘endure’, but the corresponding grammatical verb is *āku* ‘to become’ (see section 422: 42).

551.11 In the Royal Achaemenid Elamite inscriptions, direct quotations are closed by the form *ma(n)*, with the appellative endings agreeing with the subject; note section 233.42. This is almost certainly the same verb, PEI **man*, in a different usage. Note that Tamil uses the exactly equivalent word, *āvatu* (the neuter appellative of *āku* ‘become’), in the equivalent usage. Of course, due to the inversion in syntax, the forms are reversed in their ordering around the quotation. For Elamite a first person quotation would be of the form: *u . . . nanku* QUOTATION *manka*, while in Tamil it would be: *nān . . . āvatu* QUOTATION *enpēn*. For both languages the quotative verb, PED **en* (section 422: 10), marks the primary end of the quotation, and the verb for ‘become’ is an appellative marking the other end.

551.2 The negative verb, PED **al* > PEI **an* + *ri* (>*ani*): PDr **al*. Proto-Dravidian clearly attests two complementary verbs of negation, **cil*, the existential negative, ‘there is not, does not exist’ (DED(S) 2106) and **al*, the negative of identity, ‘is not a, does not become’ (DED(S) 198). See Asher, 1968: pp. 88–111 for examples from Malayalam on how this pair of verbs can be used. These verbs tend to be highly defective and usually function more as appellative bases than as normal finite verbs. For Dravidian, these are the negatives of the corresponding positive verbs, PDr **ul* (section 422: 20) and **āk* (section 422: 42), respectively.

Proto-Dravidian **al* almost certainly is cognate with the Elamite prohibitive *ani*; see section 243.11. Their usages are very similar. The connection must assume the common Dravidian shift of *l* to *n* before *t* with the assimilation of the *t*, i.e., PED **al* + **tə* → **anti* > PEI **anri* > *ani*. Compare the parallel changes for the numeral ‘one’ in sections 541.2 and 422: 13.

It is tempting to see a connection in the Elamite negative base *in-* (see section 242.513) and PDr **cil*, particularly given the foregoing change and that **cil*

becomes *il-* in South Dravidian. However, the initial *c-* is emphatically present in Proto-Dravidian and unless Proto-Elamite lost it sporadically, there is no justification for this. Presumably, it is a chance similarity.

552 Verbal Personal Endings

552.0 The Elamite verbal conjugation (true verb) does not survive in Dravidian as a paradigm. However, some of the endings survive in related usages. The first person forms, *h* and *hu* (<**h* + **h*) and the plural forms in *-h-* seem to have no cognates whatsoever in Dravidian. This is readily explainable as being due to the loss of functional **H* in Proto-Dravidian, except for the deictics and a few verb roots, i.e., always at the end of the first syllable. This leaves only the third person *-š* and second person *-ti* as possible reflexes of PED forms. Both have cognate forms in Dravidian.

552.1 Third person, PED **(V)š* > PEI *-š* PDR **-ay*. There are a large number of Dravidian verb stems which end in an augment *-ay* on a verb root. In spite of the large number of verbs attested in South Dravidian with this format, it is impossible to say what the *-ay* means. It is just an augment, and similar forms show up throughout Dravidian morphology. Examples include a small group of verbs in Kurux, Hahn’s second class (1911: pp. 59–60), which have a *-y-* inserted in the third person forms of the past tense: Kur *an-k-an* ‘I said’, but *an-y-as* ‘he said’, *an-y-ar* ‘they said’.

A morpheme **-ay/-y* is the precise form expected in Proto-Dravidian from the PED **(V)š*. In other words, the most common of Elamite personal verb endings survives in Dravidian as a stem augment, an augment without any discernible meaning. This occurs exactly in the area of Dravidian verb morphology where such archaic forms should be found.

A complication is the possible homophony of **-aš*, which is also a noun formative; cf. section 514. Since Dravidian derivation allows noun and verb roots to interchange as long as they fit the restrictions of phonological shape, it is not always possible to say if a given form in *-ay* in Dravidian has its ultimate origin as a noun or as a verb.

552.2 Second person, PED **-ti* > PEI **-ti*: PDR **-ti*. In Middle Elamite the second person forms of the finite verb function as imperatives too. This is precisely where these forms have survived in South Dravidian, not in the positive imperative, but in the negative imperative where they have remained essentially unchanged. Proto-Tamil-Kodagu (PSDr?) has a negative imperative consisting of the negative

marker **-ā-* (see section 132.34) followed by **-ti* in the singular and **-tim* in the plural (Subrahmanyam, 1971: pp. 500–502); note OTa *cellāti* ‘do not go there’. Even in Modern Tamil, these forms are essentially maintained as *-ā-tē* and *-ā-tīr(kal)*.⁷ These endings are clearly based on the morphology found in PED, but they may be influenced by the appellative **-ti*; note section 542.3. There is no overall pattern of negative imperatives in Dravidian, and no independent reconstruction for Proto-Dravidian is possible. However, given the archaic formation of these endings, and the fact of the plural in **-m* (which is not maintained in the verb even in Old Tamil), these forms have a good claim to be reflexes of PED verbal morphology. Note section 521.1.

553 Other Endings and Clitics

553.0 Among the endings handled in Elamite as verbal clitics, the more important ones have cognates in Dravidian, usually in a basic but nonfinite form. Three of these are particularly noteworthy.

553.1 The past marker, PED **-tā* > PEI **-tā* : PDr **-t(a)*. This morpheme is one of the more confusing in usage. Insofar as possible, it is necessary to separate the verbal uses of PED **-tā* from homonyms used as nominal derivatives (section 513) and neuter appellatives (section 542.61). In the verbal morphology as attested in Elamite, it commonly occurs in relative clauses (always so in the Royal Achaemenid inscriptions). It is also found on finite verbs to give a sense of completeness and finality; see sections 233.32 and 242.442. Grillet (1970: p. 217) hypothesizes that the basic morphology of Middle (and Achaemenid) Elamite involved contrasts in voice and aspect, to which an optional past tense morpheme *-tā* could be added when necessary. If this hypothesis is correct, the immediately obvious connection is the most fundamental of all Proto-Dravidian past tense markers **-t* (with variants *nt*, *ntt*, *it* > *i*, etc.). It is highly probable that the identification of these forms as cognate is correct. However, the immediate mechanism is not obvious since Proto-

Dravidian past tense morphology is not well understood at the moment; see section 132.211. It is quite possible that the morphological connection goes through the converbial (section 132.311) or the past participle (section 132.32). However, a few verbs show how the connection could have been made: AE *kušišta* ‘she has children’ (←*kuši-* ‘to build, bear’), PTaKod **keytā* ‘having done’ (converbial of **key-* ‘to do’), OTa *ceytu* ‘id.’, *ceytaṇ* ‘he did’, *ceyta* ‘done’ (participle); RAE *bešta* ‘he created’ (←*peš-* ‘to create’), PTaKod **peytā* ‘having rained, placed’ (converbial of **pey-* ‘to rain, place’), OTa *peytu* ‘id.’, *peyta* ‘rained’, *peytatu* ‘it rained’ (see section 422: 72). Only a thorough, case by case examination of Proto-Dravidian verb morphology can show whether this is accidental or cognate. Certainly most South Dravidian verbs have undergone much more change and reorganization.

553.2 Subordinator, PED **-a* > PEI **-a* : PDr **-a*

553.20 In Elamite the clitic *-a* acts as a general subordinator; see Grillet, 1970, 1973: pp. 145ff. With verbs it shows coordination (Hallock, 1959: pp. 5ff.) or some other type of semantic connection; see sections 242.441 and 243.2. Dravidian has two possible candidates for cognates, the infinitive (section 132.312) and the past participle (section 132.32), both of which have the form *-a*.

553.21 The Dravidian infinitive is the more direct connection. As a nonpast converb, it indicates that the nonfinite verb to which it is attached follows (or is simultaneous with) the finite verb in time, and that the two verbs are semantically connected. It is a relatively straightforward outgrowth of the PED subordinator **-a* in its role of connecting two verbals. In Dravidian languages this *-a* usually occurs on a specific stem, forms in *-(k)k-* and *-(p)p-* are typical, which presumably is the reason for the further semantic restriction in Dravidian. In South Dravidian, the *-a* is always followed by geminated obstruents, a possibly relevant fact.

553.22 The past participle in Proto-Dravidian is formed on the past stem (exact Proto-Dravidian form ?) plus **-a*. The nonpast participle is formed in **-uN*; see sections 132.32 and 554.12. This form connects a verb with a noun by making the verb into a modifier. Perhaps significantly, in South Dravidian this *-a* does not cause gemination of following obstruents. It is not clear if this phonological difference with the infinitive is due to a different origin or to the differing syntactic patterns. Other evidence would indicate that there would be no great problem in handling the contrast as a syntactic one,

⁷ The general addition of a dental stop to the South Dravidian negative medial (*ā* > *āt*) is due to several sources becoming confused and falling together. The negative imperative has its dental from the old second person ending (*ā* + *ti*). The past participle was formed by the straightforward analogy of adding the past medial (*t*) with the participial ending (*a*) to the original negative medial (*ā*), i.e., *ā* + *t* + *a*. In a further extension of the analogy this past medial *t* (which is also a converbial marker) was added to the negative converbial (*ā* + *tā*). This last step exemplifies the tendency for the negative medial to be reanalyzed as *āt* with the appropriate endings added.

but the matter is unclear. This formative is a significant source of adjectives for some Dravidian languages.

553.23 Thus, Proto-Dravidian has two possible attestations of PED **-a*. Significantly, they go on different stems and have different syntactic patterns, but they share the ideas of connector, subordinator, and coordinator. It is possible that two separate morphemes are involved here, but there seems to be no compelling reason to divide them. Elamite has usages paralleling both Dravidian formations.

553.3 *Imperatives in a nasal*. There is possibly a cognate connection between the Middle Elamite precativ ('may ____') in *-ni*, *-li*, *-na* (*-ni* < **-N* + *li* ?) and the general Dravidian imperative plurals in PDr **-uN*. However, both of these may be derived from, or influenced by, the second person pronoun *-ni* or the pronominal plural *-m*. This is a possible, but rather ambiguous, connection.

554 Medials

554.0 The morphemes (*-n*, *-k*) which mark the verbal bases in Elamite for both appellatives (nominal conjugation) and the participles tend to have a manifestation in Dravidian not only circuitous, but multifaceted as well. Commonly they are found in that amorphous area known as augments, although in particular cases they end up as medials or even as participial endings. Basically, they are found at the most fundamental and seemingly archaic levels of Dravidian verbal morphology.

554.1 The Durative/Nonpast, PED **-N* > PEI **-n* : PDr **-aN* : Br *-un*

554.10 In Elamite this ending forms a durative aspect with implications of a nonpast, but is probably not a true tense. It functions as an appellative base and as a participle. Both uses have direct cognates in Dravidian languages; Old Tamil has parallel forms and functions: OTa *varun* 'coming', *varunar* 'ones who come'. See sections 132.212, 132.32, 132.41, 233.31, 242.431.

554.11 The durative PED **-N* is used as a predicate in the sole verbal paradigm in Elamite with direct cognates, as a paradigm, in Dravidian languages. See section 543 and McAlpin, 1975a: pp. 105–107 for discussion. Briefly summarized, the Middle Elamite "active" appellative (Hallock's Conjugation III for Achaemenid Elamite) is directly relatable to a set of nonpasts in Dravidian languages where the primary tense marker is *-n*. This relates directly not only to this *n*, but also to the appellative endings of Middle Elamite maintained as a set in the nonpast of Proto-

Dravidian and clearly attested in Old Tamil (SDr), Konda (CDr), and Kurux (NDR). See tables 5.4, 1.9, and 2.5; also sections 132.41 and 242.431. This paradigm is clearly Proto-Dravidian, but it is archaic, and not productive or terribly important in any modern language (except for conservative Konda).

The important thing that it shows us is the formal relationship of Elamite and Dravidian verbal morphologies. As has been repeatedly pointed out (see sections 131.4, 242.431, and 242.51), Elamite and Dravidian share systems in which appellatives play a major (dominant for Elamite) role. Both these appellative systems contrast with nonappellative morphologies. However, it is not the case that the Elamite appellatives are cognate with the Proto-Dravidian appellatives. In fact, the evidence is directly contrary. Due presumably to differences in absolute time from which they are attested (the last Achaemenid inscription precedes the oldest Old Tamil inscription by some centuries), there is "morphological slippage" between the forms. Achaemenid Elamite appellatives correspond item for item with Proto-Dravidian verb morphology, not with Proto-Dravidian appellatives. This seems to be part of a general pattern. Verb stem augments are the same in Dravidian, but verb endings in Elamite are also augments in Proto-Dravidian. Appellative medials in augments correspond to augments and tense markers. Appellative endings end up as verb endings. Dravidian appellative medials come partly from Elamite clitics, while Proto-Dravidian appellative endings are distantly related to Elamite personal pronouns. In other words, the forms in Dravidian verbs are not cognate with their functional equivalent in Elamite, but with the morpheme one step to the right. The morphology has slipped. See figure 3 and section 623 for further discussion. PED **-N* has cognates other than the usual one as a tense/aspect marker in both Elamite and Dravidian. It is highly likely that the nasal so repetitiously appearing in Proto-Dravidian tense morphemes, *nk(k)*, *mp(p)*, *nt(t)*, etc., is in fact this PED morpheme. What is not clear is whether it is directly cognate, or the result of analogical spreading of this **-N* from another usage. A relevant point comes from the grammar of Gondi, where *-t-* (<**-tt-*) and *-nt-* pasts are separately available for all verbs. Here the *t*-pasts are punctual in aspect and the *nt*-pasts are durative.⁸

⁸ P. S. Subrahmanyam (1971: p. 269) analyzes the *-nt-* Past Irrealis cum Habitual of Gondi (see table 1.10) as a nonpast. I would analyze it as a combination of an aspect marker (*n*) with a past marker (*t*) which properly attests both basic Proto-Dravidian systems. I wish to credit James W. Schubert, whose

554.12 In addition to functioning as a medial before personal endings, the morpheme *-n* in Elamite functioned as a participial ending in its own right (i.e., with no personal ending); see table 2.4. In Proto-Dravidian the nonpast participle (verbal adjective) is formed with **-VN*. This is still attested in many cases (such as Modern Tamil), even when the verb paradigm has shifted base. Due to the tendency of participles to lose their verbal content and become adjectives, these forms with a nasal commonly end up in that function. This is almost certainly the case in Brahui, where adjectives regularly end in *-un* (or *-k*; see section 554.24 and Bray, 1909: p. 62).

This participial function of **-N* can readily be reconstructed for PED. Thus, PED **-N* has two identifiable uses: (1) as a medial with PED appellative endings, and (2) as a participle without endings. Its function as a participle has been more stable in Dravidian and it has sometimes served there as a base for new formations, using the Proto-Dravidian appellative endings; note the Parji forms in table 1.10. Only the nature of the appellative endings themselves can separate the two groups.

554.2 Mediopassive, PED **-(N)k* > PEI
**-k* : PDr **-(ŋ)k* : Br *-ng*

554.20 It took a long time to identify the cognate of Elamite's passive *-k* in Dravidian. The main problem was the false lead provided by Elamite. There, *-k*- patterns with *-n*- in the surface morphology and a similar pattern was sought in Dravidian. It basically does not exist. PDr **-N* patterns with the Tense-Aspect-Mood morphemes, particularly the past markers. Dravidian does have a large group of velars in its stem augments which immediately precede the medials (such as PDr **-N*). These velars seem to be cognate with the Elamite passive or to be influenced by it. However, there has been a fairly massive morphological reinterpretation with rather tangled lines of cognation. The morphemes discussed in the following sections may be cognate with PEI **-k*, or they may not be. Sections 554.21 and 554.24 are almost certainly cognate, section 554.22 probably is, and sections 554.23 and 554.25 are somewhat less likely. However, all of these constructions have been influenced by PED **-(N)k*-, even if it is only through morphological confusion.

554.21 Mediopassives. In Elamite, the morpheme

-k clearly marks a mediopassive/intransitive form. This is definitely cognate with the velars of the Brahui suffix, *-ingl-eng*, which is added to verb stems to create the mediopassive (Bray, 1909: pp. 172-177). Loss of nasals in consonant clusters is the regular pattern in Elamite; see rule 16, table 3.1. The phonological and semantic fit is precisely in the expected range. This similarity must be viewed, however, with an eye to the relationship between Elamite and Dravidian; see section 536.1 and figure 2.

If we look at Dravidian proper, there are very few possibilities for a direct reflex of PED **-(N)k*. The most likely is the formative for an intransitive (from a transitive) in Malto, which is normally *-Gr-* with a variant *-r-*; *íse* 'to tear', *ísGre* 'to be torn' (Das, 1973: p. 61). Uvular *G* is the normal reflex of PDr **-k-* in Malto. This is closely related to the passive formation in that language, which uses *-uwr-* or *-ur-*; see Droese, 1884: p. 47 and Das, 1973: p. 65. Closely related Kurux has only *-r-* for both usages (Hahn, 1911: p. 61): *esnā* 'to break', *esrnā* 'to be broken'; *kolnā* 'to open', *kolrnā* 'to be opened'.

The rest of Dravidian does not have a regular passive/intransitive formative, but tends to have reworked verb morphology to produce root forms which are inherently intransitive (affective). Many of these intransitive forms end in *-r*, however, and are clearly cognate with Kurux-Malto mediopassives in *-r*; see section 132.111. Middle Elamite has a few examples of verb augments in *-r* (Reiner, 1969: p. 79), but the meaning of these is unknown. The only direct connection with *-k-* is through the Malto examples mentioned above.

554.22 If, however, we look somewhat deeper into Dravidian (especially Central and South Dravidian) morphology, intransitive morphemes with velars abound. In the Dravidian augment system as attested in South Dravidian, the most common consonantal augments ($+^2V_1^1 \ ^3C_1^2$; see section 122.0) for intransitive stems are the velars *-Vnk* and *-Vk*.⁹ These regularly have transitives (effectives) in *-Vkk* (in Tamil-Malayalam **ŋkk* > *kk*). These velar augments, *-nk* and *-k*, have no detectable meaning, except that they derive intransitive (really affective; see section 132.131) verbs from roots which may or may not be attested as independent verbs: Ma *kalaññ-uka* (*ññ* < *ñk[ŋk]*) 'to be agitated', *kalakk-uka* 'to confound', *kalar-uka* 'to be mixed' (*kala-* 'mix'); *maṭaññ-uka* 'to be folded', *maṭakk-uka* 'to fold'; *vāññ-uka* 'to

Ph.D. dissertation, "Topics in the Morphology of the Dravidian Verb" (University of Pennsylvania, forthcoming), first made this point. This dissertation has influenced my thinking on several details of past tense formation in Dravidian.

⁹ In Malayalam, 23 per cent (249 out of 1,080) of Dravidian verb stems end in transparent velars; see footnote 26 in section 132.114. This is the second most common such grouping of endings, following only that of the formatives in *-ay/i*.

take, receive' (<*vā-* 'to come' ?). These verb stems with velar augments can be interpreted as reflexes of a Proto-Dravidian mediopassive formative **(n)k-*, which was reanalyzed as part of the stem when the Central and South Dravidian languages lost the productive passive.¹⁰ It seems as if Kurux independently lost the velar from its intransitive formative, since it is preserved in Malto. Thus, a passive/intransitive in **(n)k* can be reconstructed for Proto-Dravidian, although at this stage we cannot be certain of the details of that reconstruction.

554.23 A third possible reflex is found in the non-past markers in **(ŋ)kk*. While attested throughout Dravidian, they are best studied as the infinitive/hortative base of Proto-Tamil-Kodagu. The connection is somewhat convoluted, but fits precisely with the verbs discussed in section 554.22. The verbs involved are vocalic final stems which show overt weak/strong morphological contrasts between affective and effective stems; see section 132.133. The infinitive base of these verbs has *-kk-* when strong and *-ŋ-* when weak. The hortative, however, maintains the weak single *-k-* which is found in the same form in Old Kannada; lax *-k-* is readily and commonly lost. Thus, we have an underlying system of weak *-k-* and strong *-kk-*. This weak *-k-* may be a reflex of the passive **(ŋ)k-*, but with a shifted function. The real argument in favor of this hypothesis is a distributional one. These verb classes cannot have a consonantal augment, although related verb stems can and do. Thus, an original *-k-* augment could have survived only by being interpreted as part of the medial system in the limited specific environment where it is found today. Even if this *-k-* is found to have another source in Proto-Dravidian, it certainly was influenced by the passive in **(ŋ)k*. The pattern of distribution is too precise for at least this not to be the case.

554.24 A possibly related set of forms is that of the participle endings in velars, which are found scattered through the Dravidian languages. In South Dravidian the nonpast participle is regularly formed in **-kum* (*-gum* for Old Kannada, *-(kk)um* for Tamil-Kodagu). This is tied morphologically to the infinitive forms discussed in the preceding section. However, par-

ticiples in velars exist elsewhere. They are regular and normal for the Past in Koraga. In Brahui, adjectives are regularly formed in *-(k)un* and *-ak* (Bray, 1909: p. 62). Thus, *balun* 'big' and *chunak* 'small' are directly cognate with the Elamite verbals in *-n* and *-k*; see section 242.43. Also, Brahui participles (Bray, 1909: pp. 83, 212) are regularly formed in *-ok*. These often have an inherently passive meaning (Bray, 1909: p. 275). Therefore, there seem to be a number of forms in Dravidian which correspond directly to the Elamite participle in *-k*, and which seem to be more or less direct survivals of these same forms.

554.25 A tempting parallel to the Elamite mediopassive in *-k* is the *k*-past found in Brahui, Kurux-Malto, and Koraga; see section 132.211. Brahui has a small set of irregular verbs which form their past in *-k* (most verbs use *-ā* or *-ē*). There is no known reason for this distribution, but pasts in *-k* seem residual and archaic. Kurux and Malto regularly have *-k-* as part of their past paradigm; cf. McAlpin, 1975a: p. 108. However, this *-k-* occurs in the second part of a two part morphology (i.e., *c + k*), which is rather obviously periphrastic in origin. In other words, we cannot be sure where this *-k-* originates, but it is almost certainly not a transparent process. The *k*-past of Koraga obviously has its origin in the participles and is relevant to the argument in section 554.24, but not here. Thus, pasts in *-k-*, which may be related to the Elamite velar morpheme, also may very well not be related. The only good evidence is from Brahui, which as discussed elsewhere (see section 536.1), is not good evidence for the morphological structures of Proto-Dravidian.

554.26 The mediopassive marker PED **(N)k* has a complex attestation in Brahui and Dravidian. It is clearly and straightforwardly attested in Brahui as *-ing/-eng*; note section 554.21. In Dravidian proper, the *-Gr-* of Malto is highly likely to be directly cognate, but remains an isolate. A more common and, given the structure and development of the Dravidian verbal root augment, certainly expected result is the one perceptible in South Dravidian. Here velars appear in two separate, but adjacent, locations in the verbal string. First, for a large group of verbs whose stems end in an obstruent or consonant cluster (³C₂³), the velars (*k*, *ŋk*, *kk*) are a sizable set. Furthermore, the basic forms (*k* and *ŋk*) are always affective (intransitive, mediopassive). These represent a major reflex of the PED etymon **(N)k*; note section 554.22. Second, in the other major group of South Dravidian verbs, those which end in a vowel or a lax sonorant, velars appear in the medials (infinitive base and re-

¹⁰ Hints as to the original meaning may be found in the irregular South Dravidian verbs, *vā-* 'to come' and *tā-* 'to bring', which add and lose an *-r-* in their formation. These two verbs are also unique in being semantically marked for first or second person datives. This may be a remnant of the semantics added by an augment *-r-* in South Dravidian. Other verbs are used for situations with third person datives.

lated forms) to indicate their affective/effective shifts; see section 554.23. The major point is that velars appear in two different adjacent slots in the verb morphology, in the stem for one group, in the medials for the other. There is no case where velars occur both in the stem and in the medials, i.e., there is no requirement for two distinct underlying velar forms. In traditional terms, there are no Graul Class 3 (*i*-past) strong verbs in Tamil.

Thus, the pattern is entirely consistent with the idea of a single morpheme $*(\eta)k(k)-$, which follows the verb root and underlies many South Dravidian verbs. In the first group, it fuses with the root (creating a consonant final stem). In the second group, it merges with the following medials, giving rise to verb class variants. In no case does it appear twice. There is no reason for requiring two separate sets of velar morphemes to follow the verb root. This is consistent with the PED pattern and understandable in light of it. Other related forms, such as the participles, may or may not have their own developmental tradition. This is probable, but not certain. Others, such as the pasts in *-k*, exist as possibilities, but no more.

In conclusion, Dravidian does have extensive reflexes of PED $*(N)k$, but they exist in that verbal augment/medial zone which has undergone considerable distortion, reanalysis, and change. The connections properly belong in a detailed discussion of Dravidian verbal morphology. However, the mere suggestion of a relationship from Elamite has provided the insight that allows us to see how similar, but seemingly disparate, forms may in fact be clearly related. At this point, the arguments rest solely on the details of Dravidian verbal structure, and are beyond the scope of this work.

555 *Augments*

555.0 The augments so typical of Dravidian stem formations (note section 132.134) seem to be cognate with Elamite verbal augments. Due to the scarcity of attestation, the following arguments depend very much on the analysis of these constructions in Proto-Dravidian. Only one augment can be reconstructed for PED with any degree of assurance. Other augments can be referred to, but since their meaning in Proto-Dravidian is unknown, there is no satisfactory control.

555.1 The causative, PED $*-t-$ > PEI $*-t-$: PDr $*-tt-$. Two etyma seem to reconstruct a clear augment in $*-t-$, in that forms with and without the augment are attested. Furthermore, in both cases, the forms with the $*-t-$ have a clearly causative meaning; see sections 422: 20(B) and 422: 80B. Given the

importance and widespread attestation of the causative augment in Dravidian (PDr $*-tt-$; section 132.134), there can be little doubt that it can be reconstructed for PED and is attested in these etyma.

There are no clear examples in Elamite of cognates of the Proto-Dravidian causative in $*-pi-$.

555.2 **Other augments.** Two other verbal augments are found in the lexical corpus. However, it is by no means certain what they mean, or if indeed, they are truly cognate. The first is PED $*-p-$, which is attested in $*ton-p-$ (section 422: 59). Except that it is an augment and does not seem to be a causative, little more can be said. Most of Dravidian's numerous augments in velars (*k*, ηk , *kk*) are clearly cognate with the Elamite mediopassive formative in *-k-*; see section 554.2. However, a few seem to be directly cognate with Elamite augments. Examples include PED $*noš-k-$ (section 422:64), $*vila-k-$ (section 422: 80A), and possibly $*mel-k-$ (appendix II, C17). See the cited entries for further discussion. The only remaining possible augment is $*-i-$, note $*vac-i-$ (section 422: 77). It is fairly common, and it is not clear that it is an augment rather than a stem vowel. In any case, there are no attested forms both with and without it, and no perceptible shift in meaning.

556. **Systematic Relationships.** Middle Elamite, on the whole, seems to have preserved the general structure of the PED verbal system better than have the Dravidian languages, and as far as reconstructible, Proto-Dravidian. Thus, the ordering and structure of Middle Elamite will be used here as the basis for discussion, i.e., here Elamite stands proxy for PED. Elamite root augments, both causative and otherwise, are on the whole directly cognate with those in Dravidian, although there are some changes in pattern, frequency, and function; see section 555. The Elamite verbal paradigm (true verb, verbal conjugation) does not have a cognate system in Dravidian. However, the third person singular ending survives as a root augment merging with the foregoing group. The second person ending seems to have survived as part of the negative imperative, although this may be from the appellatives. All other forms are lost in Dravidian due to the general loss of PED $*h$; see section 542. This is a major example of the asymmetrical, stepped type of relationship between the with the archaic nonpast verb in Dravidian; see section 542. This is a major example of the asymmetrical, stepped type of relationship between the morphologies of Elamite and Dravidian and then again within Dravidian; see figure 3 and sections 554.11 and 623. In these asymmetrical relationships a paradigm is not cognate with its functional equiva-

	ME Morphology	PDr Morphology
	Stem Augments	Stem Augments
Non-Appellative Verb	Personal Endings	Tense-Aspect-Mood Medials Personal Verb Endings
Appellative Verbals	Participles Appellative Endings	Participles and Converbials Appellative Endings
	Clitics	Clitics

FIG. 3

lent, but with its archaic survival which often has a new function; see section 623 for further discussion of this point. In general, the Elamite verbal clitics are cognate with the Dravidian nonfinites (converbs), although the one in **-ta* has expanded greatly into the past tense as a medial.

Several of the developments in Dravidian which are not found in Middle Elamite are, however, reflected in Achaemenid Elamite. These include the expansion of the verbal third person ending into the stem (cf. the imperative in section 233.33) and the use of the clitic *-ta* as a past marker. These may be manifestations of fine points of PED usage which would be difficult to reconstruct in detail. Thus, in spite of considerable innovation in the Dravidian verbal system, there is an obvious similarity and connection between the verbal systems of Elamite and Dravidian. Further developments in Dravidian will be discussed in section 623.

VI. IMPLICATIONS

6.1 COGNATION

610. The primary purpose of this work has been to prove beyond any reasonable doubt that Elamite and the Dravidian language family are truly cognate. Before summarizing the evidence for this position, it would perhaps be best to review the basic theories on how languages are proven to be cognate. The fundamental criterion for cognation is systematic sound correspondences in basic vocabulary. Such correspondences cannot be due to chance or to borrowing if they occur beyond a minimal frequency. Cor-

respondences in morphology, except to the degree that they further exemplify the phonological correspondences, are not a crucial consideration. However, except in cases of extremely distant relationships, the morphologies of two cognate languages are expected to correspond or to be relatable. It is a welcome confirmation of a hypothesis established elsewhere. See Anttila (1972, especially pp. 318–320) for a discussion of this topic. The hierarchy of evidence is clear in that if two languages showed close morphological similarities, but could not be shown to have systematic phonological correspondences, cognation would be rejected and the evidence explained away as due to linguistic universals, grammatical typology, areal and other borrowings, or pure chance. The attempts to relate the Altaic and Uralic families is an example of this type of situation.

As a more extreme case, syntax is a linguistic universal, and while strongly patterned, is not patterned in such a way as to be illuminating on questions of cognation. Syntax can neither prove, nor disprove, fundamental cognation. In closer relationships, it can be informative for some details of the exact nature and degree of the connection.

611. The phonological correspondences given in chapter 3 and their consistent and systematic exemplification in the sets of words given in chapter 4 establish the basic case that Elamite and Dravidian are cognate. In chapter 4 (and appendix II), the actual reconstructed words for PED are given. In this, Elamite has always been the limiting factor, since there are fewer than 250 lexical roots (initial (C)VC) with both a well described phonology and a useable

meaning. Of this limited base, about 40 per cent of Achaemenid Elamite roots are cognate. In Middle Elamite, using strict phonological correspondence and clearly related meanings, the cognation rate of roots is 50 per cent (seventy-three out of one hundred forty-nine); see McAlpin, 1979: pp. 176–177. In closely controlled texts, it can go much higher; see appendix II. With this high cognation rate, emphatically above chance levels, the basic case becomes an established *prima facie* one. In other words, the idea of cognation cannot be rejected out of hand, but must be refuted point by point, specifically by individually showing that the word pairs presented are not etyma, but are due to other causes or that sound correspondence rules are inconsistent.

This analysis was begun in my article in *Language* (McAlpin, 1974). There, however, the discussion of the lexical sources of the etyma was minimal and many scholars quite properly took a wait-and-see attitude. Only those scholars who were already familiar with large portions of the source data, such as Herbert Paper (cf. McAlpin, 1975a: p. 111) and Kamil Zvelebil (cf. Zvelebil, 1974), came out early with favorable responses. Most were simply not engaged enough by the question to wade through often obscure citations for the etyma. However, the fundamental case was established and has never been formally refuted or even systematically questioned.

611.1 Many scholars also hesitated because of a conundrum presented by the data. The tightness of the correspondences and the large percentage of reflexes found in the Elamite vocabulary argued forcefully that this was not merely a question of cognation, but of very close cognation. If Elamite and Dravidian were so closely related, then where were the expected morphological correspondences? Some, like the case endings and the second person pronouns were obvious (cf. McAlpin, 1974), but most were not. There certainly was no obvious systematic relationship between the morphologies of Elamite and Dravidian. The evidence in McAlpin, 1975a, while confirming the basic hypothesis, raised as many questions as it settled.

612. While it took considerable time to gather and consolidate the information available on Elamite morphology, the real problem lay with our understanding of Dravidian. The sound correspondences, lexical etyma, and occasional morphological pattern insisted that Elamite and Dravidian were closely cognate. However, this relationship was not at all apparent in most of the morphology reconstructed for Proto-Dravidian. It slowly became clear that there were several major misconceptions as to the structure of

Proto-Dravidian. Most fundamental was the lack of appreciation of the appellative as a separate, but parallel, morphological system, particularly for the verbs. What had been previously reconstructed was a confusing combination of two morphological paradigms, one appellative and one verbal. Where they could be separated the tendency was to follow the appellative (which has been more productive and innovative), but as the sole system. Once information from Elamite made it clear that two processes were involved, the beginnings of order could be found. The dual nature of Proto-Dravidian verb morphology will be elaborated in section 623. The main point here is that previous work had been concentrating on the appellatives rather than the verbs, which confused matters since the Dravidian appellatives are not cognate with Elamite, but seem to be an innovation. The Dravidian verbal system, which is cognate with the Elamite appellative one, was largely buried by its more productive alternative. However, it did serve to confuse the issue immensely. Once the separation had been made, the relationship was fairly straightforward, if not completely understood. This morphological relationship has been delineated in previous chapters.

612.1 What has emerged in the end is entirely consistent with the concept of the two languages being closely related. Three whole morphological patterns—the cases, the personal pronouns, and the appellative endings—have been shown to be cognate as systems, although with the inevitable reinterpretations. Other morphemes, such as derivatives and verbal clitics, are now seen to be cognate. The only limits are those set by our imperfect understanding of the grammars of Elamite and Proto-Dravidian. The morphologies are not only cognate, but are massively so, and this totally reinforces the idea that Elamite and Dravidian are very closely cognate indeed. They are so similar that they must be looked upon as sister languages in a unified family. They seem to be more closely related than modern English and German. In fact, they are so close that each can definitely shed light on the obscurities of the other.

613 Syntax

613.0 Even when phonological, lexical, and morphological relationships have been explained, there still remains the tertiary consideration of specific syntactic patterns. To put it more specifically, can F. B. J. Kuiper's objections (see McAlpin, 1975a: pp. 110–111), that the basic orderings of Elamite and Dravidian are different, be handled? Kuiper observed that Dravidian languages have a consistent

ordering of modifier before modified while Elamite has the opposite, modified followed by modifier. This is a valid observation, and in the face of such close cognation, a good question indeed. It can now be answered in detail.

613.1 Both Elamite and general Dravidian syntax agree on a number of basic principles. They are both Subject-Object-Verb languages and have the corollary of postpositions instead of prepositions. See Greenberg, 1963: pp. 73–113 for a discussion of the principles involved. Dravidian consistently follows through with modifiers before nouns, adverbs before verbs, etc. On the other hand, Elamite is mixed. Adjectives follow nouns, quotations follow the quotative verb, but (like Dravidian) adverbs precede verbs and subsidiary verbals precede dominant ones. Given Dravidian's consistent pattern we can safely assume that it has maintained the original format and that Elamite, under areal influences, had started to move away from it, but only in specific constructions, particularly the noun and adjective.

The question then becomes: Can Elamite's shifts be understood in terms of Dravidian (and presumably PED) morphology and syntax? I believe that they can. Dravidian attests two possible constructions of modifier and modified; see sections 141.1 and 141.4. The first is the more common construction of invariant attribute preceding the noun. The second consists of what is technically a string of nouns in apposition. In this case the main noun precedes and is followed by the modifier noun. The following nouns must be in full agreement with the head noun and normally postpositions are attached at the end of the string, i.e., only to the last noun of the set of appositives. When true attributes are used in this system, they are made into the appropriate nouns by means of the appellatives. It is clear that the system of modifiers in Elamite is in complete agreement with this second system, including details of agreement and postposition ordering. Thus, except that the basic pattern in Elamite corresponds to the rarer pattern in Dravidian, while Dravidian's preferred ordering has seemingly disappeared (?), there is no problem.

Similar examples and arguments could be put forth for the ordering of quotations, and even for the appearance of relative pronouns in Achaemenid Elamite. Both have their parallels in the variations of purely Dravidian syntax. Under external influences there would be no difficulty at all in explaining their frequency.

614. In summary, the cognation of Elamite and Dravidian is limited only by the problems of attestation in Elamite and our comprehension of Proto-

Dravidian. Within these limits almost everything is clearly cognate or clearly an innovation. Many of the specific observations and connections presented here could be mistaken, without altering the basic fact of cognation. Many changes will be made as our understanding advances, but the basic relationship must remain.

6.2 IMPLICATIONS FOR COMPARATIVE DRAVIDIAN

621. **Position of Brahui.** The arguments for a reinterpretation of the position of Brahui with respect to the Dravidian family have been presented at length in section 536.1. In brief, it can be clearly shown that there are two major innovations in Proto-Dravidian that are not shared by Brahui. These innovations are in the personal pronoun system with the creation of a new nominative on the model of the oblique, and in the noun cases, where the adessive is extended into a dative usage. Such innovations mean that, by definition, Brahui is not a Dravidian language in the strictest sense. Of course, it does remain closely related. At the moment, it is not clear how the relationship between Brahui and Elamite and Dravidian will be settled; note figure 2. One possibility would be a redefinition of the term Dravidian to include Brahui. Another would have it as an independent third branch of PED. And it even may be closer to Elamite.

622. **Dravidian Subgrouping.** Even leaving aside the position of Brahui, the reconstruction of PED still has tremendous implications for subgrouping within Dravidian: cf. section 112.3 and figure 1. It strongly supports observations that Telugu-Kui does not share innovations with Kolami-Parji to establish a Central Dravidian group. This is due to the fact that many of the proposed innovations (cf. Subrahmanyam, 1969*b*) can now be seen as shared retentions. This is part of a larger shift away from South Dravidian (especially Tamil-Kodagu) as a model for Proto-Dravidian, since it has become clearer that there has been massive innovation in the verbal structures of the southern group. Thus, the weighting of evidence now swings more in favor of Kurux-Malto and Konda-Kui. In other words, all of the subbranches are essentially coequal with perhaps a slight precedence being given to the independent Kurux-Malto; note figure 2. More important is the location and identification of true archaisms in all branches, most commonly found in female speech in Kurux, Konda and Kui, and Old Tamil. To conclude, work to date strongly supports the idea of the independent subgroups of Tamil-Tulu, Telugu-Kui, Kolami-Parji, and Kurux-Malto, all equally related to Proto-Dravidian. As presented in figure 1, there is no clear basis for

grouping them further. This may be resolved with a better understanding of Proto-Dravidian.

623 Dravidian Morphological Structures

623.0 As was discussed in section 556, there is clear evidence for two lines of morphological relationship between the verbs of Elamite and Proto-Dravidian. The first, and the weaker, is between the Elamite verb and Dravidian augments and imperatives. The second, and the stronger, is between the Elamite appellative and the Dravidian verb. Thus, while both groups of languages have internally paired types of morphological patterns (nonappellative/appellative) symbolized by A : B, it is the second pattern, B (the appellative), of Elamite which is cognate with the first, A, of Dravidian (the nonappellative), rather than directly A to A and B to B. This can be symbolized as:

$$\begin{array}{c} A : B \\ \downarrow \\ A : B \end{array}$$

which gives us a "stepped" relationship; see also figure 3. In other words, appellative systems tend to be productive, generating new systems of appellatives. This co-occurs with the shifting of the older appellative out of the appellative system into the verbal one. Through time, old appellatives become nonappellatives (verbs), simultaneously replaced by a new system of appellatives more closely connected with the pronominal endings. This model of stepped innovation, using appellatives, is very illuminating for comparative Dravidian verbal morphology.

623.1 If we take a specific example from the nonpasts of Tamil, this can be made more clear. The Modern Literary Tamil Future has a dual morphological base with the human forms taking *-v-/p-/pp-* with the personal endings, and the neuter forms having just *-um/-kkum*, the same form as the participle (verbal adjective): *eṇṇēṇ* 'I will say', *eṇṇāṇ* 'he will say', *eṇṇum* 'it will say'. The corresponding appellative nouns (participial nouns) are all formed on the labial system: *eṇṇavaṇ* 'he who will say', *eṇṇatu* 'that which will say', rather than the participle properly speaking, *eṇṇum* '(which) will speak'. In older Tamil the appellative system was available in all persons: *eṇṇavēṇ* 'I who will say'. In other words the future appellative has a simple, straightforward morphology in labials, while the future verb has a dual system, partially in labials and partially in *-(kk)um*. See the Tamil forms in table 1.10.

However, in Old Tamil another system is attested; note the Archaic Nonpast in table 1.9. Here, there is

no surface tense marker, but the underlying form uses a nasal which is preserved in the neuter ending *-um*: *eṇku* 'I say', *eṇṇum* 'it says'. Taking these together, it is quite clear that the Modern Tamil Future verb is a composite of the Archaic Nonpast and the Future appellatives. The Archaic Nonpast is the source of the neuters, while the Future appellatives give the personal forms by simple contraction and analogy (*ava* > *ō* : *ā*). All stages are attested and unexceptional. Thus, the modern future verb transparently is an appellative in origin. However, the Tamil Archaic Nonpast, which is directly descended from a Proto-Dravidian paradigm (see section 132.41), is itself directly cognate with the appellative in Elamite. Since it is fairly clear that Elamite has preserved the PED situation, we have a case where a PED appellative becomes a verb in Proto-Dravidian, preserved as such in Old Tamil. This, in turn, is replaced (in part) by a new verb adapted from the Proto-Dravidian appellative system. Using A for the nonappellatives and B for the appellatives, this can be schematized as follows:

$$\begin{array}{lcl} \text{PED (and ME)} & A : B & \\ \text{PDr (and OTa)} & \downarrow & A : B \searrow \\ \text{NTa} & & \downarrow \quad A : B \end{array}$$

623.2 Traditionally, comparative Dravidian has tried to line up all the A's and all the B's. While there was a contrasting system (verbal : appellative), the morphology was confused at best. The stepped type of relationship has promise of solving some of these problems.

This relationship helps to explain how there could be so much change in detail while the grammatical grid remained so stable. In other words, since there were two morphological systems for verbs which shared a basic framework of categories, changes in any one of them would not necessarily affect the categories of the other. Thus, reanalysis and hypercorrection were always available to reregularize the system. Only when both systems got pulled together in one modification could unidirectional change occur. When this did happen, it could be fast and massive. As a working hypothesis, I believe this is what happened with the verbal structure of Proto-South-Dravidian and why it has little direct implication for Proto-Dravidian. At the moment, this remains a hypothesis to be explored in real detail and is an obvious next step in Comparative Dravidian.¹

¹ I am currently working on a systematic, verb by verb, stem by stem, analysis of the verbal system in South Dravidian. Preliminary observations on verb stems, their augments, phono-

The suggestion of new hypotheses is a direct result of the cognation of Elamite and Dravidian. The impact of Elamite on Comparative Dravidian has been, and will be, dramatic.

6.3 SOUTH ASIAN PREHISTORY

630. The cognation of Elamite and Dravidian, or more precisely the nature of this cognation, has major implications for the prehistory of South Asia. Most of this is not the province of this work, and it cannot be supported in full detail here. However, certain major points and an outline of their ramifications can be made; see McAlpin, 1979 and Zvelebil, 1972a for other discussions of this topic.

631 Semantic Evidence from Proto-Dravidian

631.0 Proto-Dravidian, like any other language, can tell us a great deal about the culture of its speakers by the nature of its vocabulary. However, being a construct, it cannot be used to argue negatively, nor need it provide a complete picture. Also, there is no real control for time depth in linguistic reconstruction. However, within these limits it can be very informative, particularly with regard to agriculture and animal husbandry; see McAlpin, 1979: pp. 180–181.

631.1 Animal Terminology

631.11 At its oldest level of reconstruction with Brahui or Elamite cognates, Proto-Dravidian has a significant number of words for animals and animal husbandry. For domesticates these include the core words for bovids and caprids: PDr **āy* 'cattle' (DED(S) 283; see section 422: 1), **yātu* 'goat/sheep' (DED(S) 4229), **it-* 'goat, goatherd' (DED(S) 382; see section 422: 18). There is a fairly extensive group of words dealing with animal husbandry: PDr **in-* 'give birth (of animals)' (DED(S) 473; see section 422: 49), **mēy-* 'graze' (DED(S,n) 4179), **kā-* 'watch, tend, herd' (DED(S) 1192), and **pāl* 'milk' (DED(S) 3370). There is also detailed vocabulary dealing with animal age and gender; 'male animal': PDr **eru* (DED(S) 777); 'female animal': **peṇ* (DED(S,n) 3608), **mūtu* (DEDS S806; see section 422: 75); and 'young animal': **kaṇru* (DED(S,n) 1187, **par-ppu*

(DED(S,n) 3369; see section 422: 65), **pōt* (DED(S,n) 3748; see section 422: 74); and **karu* 'fetus' (DED(S,n) 1074; see section 422: 25). Wild animals are restricted to PDr **muyal* 'rabbit, hare' (DED(S) 4071), **eli* 'rat, mouse' (DED(S) 710), **toḷa* 'wolf, jackal' (DED 2926), and **ivuli* 'wild horse, onagar' (see appendix II, D2 for discussion) (Den S² 9A). Small animals are restricted to **tēl* 'scorpion' (DED(S) 2855), **puzu* 'worm' (DED(S) 3537) and **i* 'fly' (DED(S,n) 453).

631.12 At a clearly Proto-Dravidian stage, excluding Brahui and Elamite and including Kurux-Malto, the pattern shifts noticeably. Words for only two new domesticates are added, PDr **erutu* 'ox, bullock' (DED(S,n) 698) and **ṇaḷi* 'dog' (DED 2377). Nothing significant is added in animal husbandry terminology. The expansion comes with wild animals, when the words for numerous types of South Asian deer, a type of monkey and for bear and wildcat appear. Smaller animals include the word PDr **mīṇ* 'fish' (DED(S) 3999) and the universal set of pests: louse, bedbug, gnat, midge, and bee.

631.13 With a slightly less restrictive definition of Proto-Dravidian, i.e., including Kolami-Parji, but not Kurux-Malto, as well as attestation elsewhere, the same pattern continues. Three significant domesticates are added to our word list: PDr **karutay* 'ass' (DED(S) 1149) and the common words for dog **nāy* (DED(S) 3022) and cat **pilli* (DED(S) 3438). For wild animals the traditional South Asian norms emerge: PDr **yāṇay* 'elephant' (DED(S) 4235), **kuraṇku* 'monkey' (DED(S) 1473), **mayil* 'peacock' (DED(S,n) 3793) and **puli* 'tiger' (DED(S) 3532). For smaller animals, the water creatures appear: crab, carp, crocodile, and frog.

631.14 Relaxing the criteria still further to those words shared only by Tamil-Telugu and Telugu-Kui (possibly a subgroup, Proto-South-Central-Dravidian), the only significant additions are PSCDr **erumay* 'female water buffalo' (DED(S,n) 699), **paṇri* 'pig' (DED(S,n) 3326), **mūṅk-* 'mongoose' (DED(S,n) 4014), **nari* 'jackal' (DED(S) 2981), and **yāmay* 'turtle' (DED(S,n) 4232). There are no words for 'chicken' above the subgroup level.

Significantly, many of the later animal words are clearly derivative: **erumay* (<**erutu* 'ox'), **paṇri* (<**pal* 'tooth, tusk'), or are highly likely to be loans from an unknown source; note **yāṇay* 'elephant' and **yāmay* 'turtle', both with the exceedingly rare initial y-.

631.15 The general pattern of animal terminology in Dravidian is for the oldest level to be already concerned with the details of domestication. That

logical shape, and morphological class support these comments. Emeneau, 1967b has a similar analysis using information from the smaller South Dravidian languages. My work has concentrated on Malayalam and Tamil, each of which has over three thousand listed verbs. Cross referencing between languages has proved time consuming, but necessary for reliable reconstruction. *Telugu Verbal Bases* (Krishnamurti, 1961) is the major detailed, verb by verb analysis already in existence.

domestication is on a West Asian pattern (sheep/goat/cattle), and the wild animals are from an arid environment: scorpion and onagar (and the ubiquitous rat).

As one gets further from Proto-Dravidian toward the major subgroups, more and more South Asian animals are added, as are more and more water animals, but there are no sea creatures of any sort above the subgroup. Vocabulary for domesticated fowl and water buffalo tends to be very restricted. Animal terminology in Dravidian points emphatically toward a relatively late (post-domestication) West Asian origin, and not towards the Dravidians' being autochthonous to South Asia, save possibly the western borderlands.

631.2 *Agricultural Terminology*

631.21 The contrast is even more dramatic for agriculture. Proto-Dravidian has a small number of terms for agriculture in general (all in Kurux-Malto, but not Brahui): PDr **uru* 'to plow' (DED(S,n) 592), **kalam* 'threshing floor' (DED(S) 1160), **key* '(wet) field' (DED(S) 1629), and **koy* 'to reap' (DED(S,n) 1763). The word PDr **vayal* 'field, cleared tract' (DED(S,n) 4298) is found in Kolami-Parji, as well as elsewhere, and is related to a verb stem meaning 'to clear land' (cf. DED 4295). However, with the possible exception of **nel* 'grain (in field)' (DED(S) 3112), there is no crop name which reconstructs for more than a subgroup. In other words, the terminology for general agricultural technique can be reconstructed, but not for any specific crop.

631.22 In terms of the West Asian connection indicated above, how might this incongruity in agricultural terminology be explained? The grain portion of the West Asian model is wheat and barley which are neither grown, nor would they grow well, where Dravidian speakers currently live. A possible explanation is that the knowledge of agriculture was brought from West Asia and that agricultural techniques were never lost. They were at times overshadowed by animal husbandry, probably taking the form of some degree of nomadism. However, as the Dravidians penetrated further into peninsular South Asia, new environments were encountered where their traditional domesticated plants (especially wheat and barley) fared relatively poorly. This, in turn, led to the discarding of these plants from both cultivation and vocabulary, and the adoption of rice and the millets. These latter plants are, of course, superbly adapted to the southern regions of India. Significantly, this scenario is well documented in the archaeological record.

Briefly summarized, South Asian archaeology sup-

plies the following information on the use of domesticated plants.² While other grains are found, the Mature Harappan civilization depended primarily on barley and wheat. In the immediately post-Harappan period, there was a great expansion of the village farming community out of the Indus plain. This extended toward the southeast, through Gujarat, and onto the northern and central Deccan. Sites such as Ahar and Daimabad are typical of this period. Increasing use of millets, together with wheat and barley, may have been a significant factor in this increase. As time passed and this cultural complex moved south (cf. the site of Jorwe), millets seemed to play an increasing role as the preferred food grain. After late Jorwe (ca. 800 B.C.), the farming village complex of peninsular India was abandoned, and the Megalithic period, characterized by pastoral nomadism, began. This shift may have been due to political disruptions and the greater personal security of a nomadic life at such times. When the agricultural village reappears in the early historic period (ca. 300 B.C.), rice and millets are absolutely dominant. Thus, after Harappa, the village farming community expanded for a millennium (1800–800 B.C.) with increasing use of millets. After the Megalithic break, characterized by few villages (but certainly with some limited agriculture), the modern pattern emerges. See Schwartzberg, 1978: p. 8 for location of the sites.

631.23 The record is unclear as to how far back the knowledge of agriculture goes. Brahui shares no core terms for agriculture with Dravidian, and Elamite has no clear attestation of anything agricultural. Crops and foods are named, but never in an identifying context. Agriculture for the Brahuīs has had, at best, an episodic nature. It would not be too surprising for them not to have kept old agricultural terminology. The one possible piece of evidence is PED **um-* 'to process grain' (see section 422: 7), which indicates that grain products were known. It does not indicate if they were cultivated rather than gathered. It is fair to say that there simply is no lexical record of agriculture that is Pre-Dravidian. Rather, there is no evidence one way or the other.

632 *PED Etyma and their Cultural Implications*

632.1 Other PED etyma provide cultural clues. The most significant is PED **upaṭ* 'brick'. Sharing the word for 'brick' puts real limits on the time of

² This analysis and the previous synopsis follow "Early Village Farming Communities in Western India" (Possehl, forthcoming). I wish to thank him for his great help in correlating the linguistic and archaeological evidence.

separation of Elamite and Dravidian. Taken together with PED **um-* 'to process grain' (see section 422: 7), it indicates that the unified culture must have shared in at least the early stages of the agricultural revolution (see section 212.1). Separation could not have been earlier than 10,000 B.C. and more likely would be much closer to 6000 or 7000 B.C. Given the numerous cognates for animal husbandry (see sections 422: 1, 18, 25, 65, 74, 75) and the close association of animal husbandry with agriculture in West Asia, the unified culture must also have taken part in the agricultural portion of the revolution. Thus, archaeology can fill in the evidence which the lexicon lacks. The possible explanation for the missing agricultural terms given in section 631.22 is thus reinforced.

Further support for this level of interpretation comes from two possible etyma in appendix II: **aṭaš* 'storeroom' (C1) and **cip* 'door' (C8). These would support the idea that the neolithic village was part of a unified culture which then separated.

632.2 This model of a late separation is considerably reinforced by the etymon PED **set* 'to pay tribute' (see section 422: 51). This would tend to indicate a level of social interaction and specialization approaching that of the urban state, i.e., to at least the preliminary levels of the urban revolution.

632.3 A third etymon helps put lower limits on the separation. The etymon PED **tal* 'to push in' (see section 422: 52) means 'to write' in Elamite. This meaning is highly specific to cuneiform writing on clay. Dravidian words for writing are derived from words meaning 'to paint' or 'to draw'. Thus, we have very good evidence that the separation is pre-literate. It might be possible that the original word for writing had been lost in Dravidian. However, there is no evidence, in any case, that would put separation so late. In summary, separation would not have been later than 3000 B.C.

633. Given the lexical evidence, there is little doubt that Dravidian and Elamite separated relatively late and in West Asia (presumably in Iran). Working with a broad interpretation of West Asian archaeology, there is clear evidence that the agricultural revolution on a West Asian model was shared, that this included a level of social organization that would indicate the end rather than the beginning of this period (i.e., after 5500 B.C.), and that the separation was pre-literate (i.e., before 3000 B.C.). Overall, the most likely period would be the fifth millennium B.C. This model fits very well with the archaeological details, often to a surprising degree. This is not, however, the aim of this work.

634 Other Evidence

634.1 There is supportive evidence from South Asia that the Dravidians are not autochthonous. The modern distribution of Dravidian speakers points to some interesting conclusions: (1) There is no evidence of an ancient penetration of Sri Lanka by Tamils. The fact that the Aryan Sinhalese were able to outflank them as the dominant group implies that any Tamil occupations were coastal and in small numbers. Given the ease of crossing the Palk Strait, this lack of Tamil occupation would be very odd if the Tamils were aboriginal to South India. (2) There is also little to indicate that the Dravidians were anciently in eastern India. The Kurux (and, by implication, the closely related Malto), according to their own traditions, have moved up the valley of the Narbada in historic times. Possibly related Koraga is still spoken on the west coast of India. (3) Brahui, which is closely related to Dravidian, is spoken in the Brahui Hills of Baluchistan on the very edge of the Iranian Plateau.

If we take one of the standard family tree diagrams and superimpose it on a map of South Asia, several interesting relationships are brought to light. The South Dravidian group has the trunk of its tree pointing north through Karnataka. Kurux and Malto look to the west, down the valley of the Narbada. For Central Dravidian, with the major exception of Gondi, closely related groups cluster in the east and south with divergent groups in the west. In general, odd groups and isolates (Brahui, Tulu, Koraga) are in the west, closely related groups in the east or south. The *Stammbaum* seems to point to Gujarat and back to Baluchistan. Thus, the pattern of distribution supports the concept of a fairly recent expansion of Dravidians into the Indian peninsula. There seems to have been a consistent northwest to southeast movement through Gujarat (except for the late shift of Kurux and Malto). Such a diagram has been put on a map and the conclusions drawn; see Zvelebil, 1972a: p. 61. An interesting piece of additional evidence for Dravidians in Gujarat, and indirectly for this type of movement, is presented by Trautmann (1979), who uses kinship terminology. The Dravidian population of the northwest part of the subcontinent was completely assimilated by the Aryans, although loan words into Sanskrit preserve significant traces; see Burrow, 1955: pp. 373–388.

634.2 **Toponymy.** A. C. Schoener in 1927 wrote and published an obscure book on Dravidian toponymy, in which he argued that traces of Dravidian speakers could be found in Iranian place-names. L. V.

Ramaswami Aiyar (1930) reviewed the book, and while making it clear that parts of this work were overblown, felt that some of it made an interesting case. He repeated a fair number of river, spring, and mountain names that he thought looked promising. Schoener's sources have not been checked, nor have other possibilities been eliminated, but the hypothesis remains one worthy of serious investigation. At present, it is unclear how much of this would apply to Dravidian properly speaking, and how much would more appropriately be labeled PED.

635 *Postscript*

635.1 The Indus Valley. The cognation of Elamite and Dravidian and the resulting implications for South Asian prehistory have further implications for the study of the Harappan civilization. It seems clear that Dravidians were in and around the Indus Valley during the time of the Harappan civilization and almost certainly played some role in it. However, while it does strengthen the circumstantial evidence that this civilization was predominantly Dravidian, it remains precisely that, circumstantial. The only real evidence, and that is indirect and problematical, is from the structure of names on the seals; see Mahadevan, 1973. Otherwise, there is no direct evidence one way or the other. Possehl (1979) gives a good survey of the literature.

635.2 The establishing of one level of cognation does lead to the question, "What of others?" That question is strictly beyond the scope of the current work. However, I will make some observations. Considerable effort has gone into demonstrating that Dravidian is cognate with Uralic; see Burrow (1944 [1968b: pp. 65–112]), Andronov (1968: pp. 14–32), and Marlow (1974). Dravidian's connection with Elamite in no way interferes with this hypothesis. However, it will take much additional work to establish that connection. It is quite possibly at such a time depth as to be unprovable using traditional methods.

636 *Summary*

The purpose of all of the foregoing has been to demonstrate that Elamite and Dravidian are cognate and to follow up on some of the implications of this in other areas. To properly do so, a great deal of background material has been included. The introduction includes a brief discussion of previous work on the connection as well as a general discussion of the concept

of the appellative. The presentation format is also outlined.

Chapter I gives background on the Dravidian languages, including the various theories of subgrouping. Comparative Dravidian grammar is outlined for phonology and morphology. The discussion of phonology is one of general consensus, published in detail elsewhere. While it includes treatments of the personal pronouns and numerals which have been described by others, the morphology is a new synthesis, focusing on the appellative system. A brief look at the syntax, using Tamil as an example, is also given.

Chapter II does much the same for Elamite. It begins with a brief discussion of the geography, archaeology, and history of Elam. This is followed by separate descriptions of Achaemenid Elamite and of the older Middle Elamite. With the partial exception of Reiner (1969), complete, detailed analyses of Elamite grammar do not exist; the subchapters here represent compilations of what is known to date of the Elamite language.

Chapters III and IV begin the comparative grammar proper. Chapter III is concerned with phonology and gives the reconstructed phonemes of Proto-Elamo-Dravidian (PED), as well as their systematic changes to their attested forms in Elamite and the Dravidian languages. Chapter IV gives the lexical etyma that embody these phonemes. Detailed citations of the lexical evidence of reflexes are provided for the eighty-one reconstructed etyma.

Chapter V continues this, but shifts to morphological reconstructions of PED. It is shown that for all morphological systems reconstructible for Proto-Dravidian, a related system can be reconstructed for PED. These include the personal pronouns, plurals, noun cases, and appellative endings. Individual details from the verbal morphology can be handled, but a lack of a systematic reconstruction in Proto-Dravidian hinders an overview.

The last chapter follows up on some of the more immediate implications. Beyond the cognation itself, this analysis has made it clear that Brahui is not, strictly speaking, a Dravidian language, and that the Dravidians arrived in South Asia fairly late in prehistory. Lexical details supporting this theory of migration are given.

Appendix I analyzes the sole Middle Elamite bilingual (with Akkadian) in considerable detail. Appendix II discusses lexical pairings that, for one reason or another, are not secure etyma. This is most commonly due to inadequacies of attestation in Elamite.

FIG. 4. The Middle Elamite Bilingual : Akkadian Version*

Line	Section
8 [ša] a-na dūri ša si-ia-an ku-uk qa-a-na i-na-az-zu-ku ni-ik-sà i-na-ak-ki-su li-pi-it-ta-šu i-na-az-za-ḫu	1 [ša] ana dūri ša Siyankuk 2 qanā inassuku 3 niksa inakkisu 4 libittašu inassahu
9 da-la-as-sú ú-qa-al-lu ù na-ak-ru ša i-ṭe-ḫi-ma si-el-lu(?) a-na dūri i-pu-šu ḫa-at-tu, ^d GAL ^d [Šušinak]	5 dalassu uqallū 6 u nakru ša iṭeḫḫīma 7 SI-EL-LU(?)** ana dūri ippušu
10 [ù] ^d Ki-ri-ri-ša si-ia-an ku-uk i-na mu-uh-ḫi-šu li-iš-ša-ki-in ù si-ru-šu i-na šu-pa-al ^d Šamaš [la i-ša-ri]	8 HA-AT-TU*** ^d Napirisa ^d Inšušnak u ^d Kiririša ša Siyankuk ina muḫḫišu liššakin 9 u zēruša ina šupal ^d Šamši [la išar(i)]

* after Berger, 1967 with variants after Reiner, 1969: pp. 116–118. Also published in Stève, 1962: pp. 72–75 (TZ47b), Rutten, 1953: pp. 74–76 (MDP 32, XXV.2), and König, 1965: p. 67 (EKI.13.B). Section numbers after König, 1967: p. 67.

** Reiner reads SI-EL-TU, *šeltu* variant of *šaltu*. Berger reads SI-EL-LU, *šillu* variant of *šilu*.

***Reiner reads *hattu*. Berger reads *hattu*.

APPENDIX I. THE MIDDLE ELAMITE BILINGUAL

In 1962 M.-J. Stève (1962–1963: pp. 68–75) announced the discovery of correspondences which he interpreted to be the first known Middle Elamite bilingual. The texts (TZ46 and TZ47), found on two sets of inscribed bricks from Choga Zambil, are almost identical in content. After closely parallel opening lines (TZ46a.1–5 and TZ47a.1–7), both end with a stock malediction. In TZ46a (lines 6–8) the language is consistently Middle Elamite, while in TZ47b (lines 8–10) the malediction shifts into Akkadian. Fifteen years of intensive investigation have made it clear that the two passages are exactly parallel, phrase by phrase. Although there are minor variations in word choice, these two texts do indeed comprise a bilingual for Middle Elamite and Akkadian and remain the only one to date.

Both versions of the bilingual are given here in cuneiform transliteration and in transcription (see figures 4 and 5). The line numbers of the original texts are given with the transliteration. Section numbers following F.W. König (1965: p. 67) are also used to more clearly demarcate parallel passages, i.e., section four of the Akkadian version is exactly parallel with section four of the Elamite version, and so forth.

The Elamite portion of these texts was first translated into French by M. Lambert (1965: pp. 26–27). This version still had too many hypothetical readings to be accurate, but it was correct in its overall structure. About the same time König (1965: pp. 66–67) translated both the Middle Elamite and Akkadian versions into German with the difficult words left untranslated or clearly indicated as guesswork.

Several years later, two Assyriologists took up the Akkadian parts of the bilingual. P.-R. Berger (1967: pp. 421–425) analyzed the Akkadian text in detail, gave a grammatical version of the text, and translated it into German. At about the same time Erica Reiner (1969: pp. 116–118) published a briefer account of the Akkadian text, but added a translation with notes of the Middle Elamite version.

Tables 1 and 2 discuss the Akkadian text section by section and word by word.¹ The presentation is ordered according to the Middle Elamite text so that minor shifts in word order do take place. The Middle Elamite text is given in the first column for ready reference. The equivalent Akkadian term appears in the following columns. In table 1, these columns give the Akkadian form as it appears in the transcribed version of the text, its meaning in the text, grammatical notes, citation forms, and other meanings. Comments by Reiner are indicated with an alpha (α), those by Berger with a beta (β). In words 17 and 20, where they disagree in interpretation, two separate lines are given. Table 2 deals only with proper names.

Berger and Reiner agree on certain difficult passages, such as QA-A-NA in figure 4, line 8 (section 2).² Berger uses an additional version (Rutten, 1953: pp. 74–76; MDP 32, XXV.2) to read *da-la-as-sú* 'its door', which Reiner leaves as X-X-as-sú. In figure 4, line 9 (section 7), Berger reads SI-EL-LU which,

¹ I wish to thank Drs. Erle Leichty, I. M. Diakonoff, and Christopher L. Hamlin for their help with the Akkadian text. However, the errors are my own.

² I. M. Diakonoff (personal communication) concurs with this interpretation, but prefers the reading *qanu* as a variant of Akk *qanû*. The word might be related to Hebrew *qaiin* 'lance'. See Berger (1967: p. 423) for a detailed discussion.

FIG. 5. The Middle Elamite Bilingual : Elamite Version*

Line	Section
6 ak-ka hu-hu-un si-ia-an ku-uk-ma	1 akka ₁ huhun ₂ Siyan.kuk.ma ₃
ku-ta-a a-ha-ar li-in-ra	2 kutā ₄ ahar ₅ li.n.ra ₆
tu ₄ -ul-li-in a-ha-ar ta-an-ra	3 tullin ₇ ahar ₈ ta.n.ra ₉
ú-pa-ti-pi du-ha-an-ra**	4 upat.ip(i) ₁₀ tuha.n.ra ₁₁
7 ha-al-te-te lu-mu-un-ra	5 halte.te ₁₂ lumu.n.ra ₁₃
a-ak pi-ti-ir ši-in-ni	6 āk ₁₄ pitir ₁₅ šinni ₁₆
hu-el(?) a-ha-ar tu ₄ -um-pa-na-ra	7 HU-EL ₁₇ ahar ₁₈ tumpa.n.ra ₁₉
ha-at ^d GAL ^d In-šu-uš-na-ak a-ak	8 hat ₂₀ ^d GAL ₂₁ ^d Inšušnak ₂₂ āk ₂₃
8 ^d Ki-ri-ri-ša si-ia-an ku-uk-pa	^d Kiririša ₂₄ Siyan.kuk.pa ₂₅
ri-uk-ku-ri-ir ta-a[k-ni]	ri.ukku.rir ₂₆ ta.k.ni ₂₇
^d Na-ah-hu-un-te ir-ša-ra-ra pa-ar	9 ^d Nahhunte ₂₈ ir.šara.ra ₂₉ par ₃₀
a-ni-i ku-tu ₄ -un	ani ₃₁ kutu.n ₃₂

* after Stève, 1962: pp. 168–172 (TZ46b). Also published in Rutten, 1953: pp. 74–76 (MDP 32, XXV.1) and König, 1965: pp. 66–67 (EKI.13.A). Section numbers after König, 1965: pp. 66–67.

** also du-uh-ha-ra.

following Von Soden,³ he interprets as *šillu* (*šīlu*) ‘hole, puncture’ in the sense of *pilšu* ‘hole, breach’. The interpretation seems to mean ‘undermining’ and perhaps somewhat freely ‘siege’. Reiner, more influenced by the verb *ippušu* (*epēšu*), reads SI-EL-TU, which she interprets as *šeltu*, a variant of *šaltu* ‘battle’. Similarly, in line 9 (section 8), Reiner interprets HA-AT-TU₄ as *hattu* ‘fear, panic’, which has parallel citations in other texts. Berger (1967: p. 424) interprets it as *hattu* ‘scepter’ (as does König, 1965: p. 67), but in an idiomatic sense of ‘sickness, curse’. Fortunately in this case, the differing interpretations of the Akkadian are not critical to our understanding of the Elamite text.

Tables 3 and 4 discuss the Middle Elamite text word by word, morpheme by morpheme, and its correspondences in Proto-Elamo-Dravidian (PED), Proto-Dravidian (PDr), and Brahui (Br). Table 3 deals with word initial lexical morphemes (roots) while table 4 deals with endings and other grammatical morphemes.⁴ In table 3 the first column gives the transcribed forms of the words, but does not include proper names and repetitions. Complex pronominal phrases (words 26 and 29) have been split for easier discussion and each form is followed by its normal meaning. Note that *li-* (word 6) has been given two separate meanings and discussions on different lines and that HU-EL (word 17) has two entirely different

interpretations on separate lines. References to the text (section numbers) and to table 4 (letters) follow in the next column.

The next section of the tables gives the PED etyma, their meanings, and cross references to their citations in the text (section 422 for numbers, appendix II for letters plus numbers). Following these, a section of three columns gives the reflexes in Proto-Dravidian, their meanings, and their citation numbers in the *DED* (Burrow and Emeneau, 1960, 1969, 1972). After these etyma, the attested reflexes in Tamil and Brahui are presented as examples. The Tamil citations are from the *Tamil Lexicon*, the Brahui from Bray (1909 [1934]). Proto-Dravidian reconstructions and actual attestations from Tamil and Brahui are given for easy reference; detailed discussions are given in section 422 and appendix II. The Proto-Dravidian forms are given for as high as they can be reconstructed within Dravidian. Of course, those terms which are cognate with Elamite are automatically Proto-Dravidian. All forms follow the rules for phonological correspondences found in chapter III; most are straightforward.

In the Middle Elamite text, the meanings of six words: *huhun*, *tullin*, *tuha-*, *kuta*, *haltete*, and HU-EL are clearly indicated only in this text. Many of the remaining words are well known from other sources. The word *huhun* clearly means ‘fortification wall’, while *tullin* means ‘breach’, and the verb *tuha-* ‘tear out, demolish’. The other three words unfortunately coincide with difficulties in the Akkadian text. *Kutā* means *qanā*, which almost certainly means ‘arrow’. Dravidian cognates will strongly support this reading; see table 3 (word 4). *Haltete*’s equivalent is missing in the main Akkadian version.

³ See *šilu(m)* Wolfram von Soden, *Akkadisches Handwörterbuch* 3: p. 1237.

⁴ Since the third person pronoun *ir/ri* occurs phrase initially, it has been included in table 3. However, all detailed discussion is given in table 4, where it is included for all calculations. This pronoun presents a methodological problem in that it has a cognate form in Brahui, but nowhere else in Dravidian. This is discussed in section 536.1.

TABLE A1: Lexical Words in the Akkadian Text

Middle Elamite			Akkadian					
§	#	Text	Attested Form	Contextual Meaning	Grammar, Notes	Citation Form	Literal or Other Meaning	
1	1	akka	[ša]	whoever		β	ša	who
	2	huhun	dūri	fortification wall			dūru	
	3c	-ma	ana	toward	prep.		ana	to, at
2	4	kutā	qanā†	arrow		β	qanū	reed
	5, 8, 18	ahar	(5, 8) Ø (18) ana dūri	at the wall	sec 2 & 3			
	6	li.n.ra	inassuku	hurl	1.		nasāku	throw
3	7	tullin	niksa	breach		α	niksu	hole
	9	ta.n.ra	inakkisu	breach	1.	α	nakāsu	make a hole
4	10	upat.ip	libittašu	its brickwork	-šu 'its'		libittu	(mud) brick
	11	tuha.n.ra	inassaḥu	tear out	1.		nasāḥu	
5	12	halte.te	dalassu†	its door	-šu 'its'		daltu	
	13	lumu.n.ra	uqallu	burn	2.		qalū	
6	14, 23	āk	u	and			u	
	15	pitir	nakru	enemy			nakru	
	16	šinni	iṭṭhīma	and approach	3., -ma 'and'		ṭeḥū	
7	17	HU-EL	{ α. šeltu† β. šilla	battle		α	šaltu	quarrel
	19	tumpa.n.ra	ippušu	undermining wage	1.	β α	šilu epēšu	hole do, make
8	20	hat	{ α. ḥattu† β. ḥaṭṭi	wrath		α	ḥattu	fear, panic
	25c	-pa	ša	sickness, curse of	prep.	β	ḥaṭṭu	scepter (β)
	26	ri.ukku.rir	ina muḥḥišu	on him				
	27	ta.k.ni	liššakin	may put	li- precativ		ša kānu	place
9	29	ir.šara.ra	ina šupal	under him				
	30	par	zērušu	descendants	-šu 'his'		zēru	seed, semen
	31	ani	[la]	not	neg. particle		la	no
	32	kutu.n	[išar(i)]	prosper	vetitive		ešēru	go straight

¹ verb, present subjunctive, third person singular

² verb, *d*-stem, here acting as intensifier

³ verb, present, third person plural

[†] problematic reading. See text and discussion.

α. See Reiner 1969: pp. 116–18

β. See Berger 1967: pp. 421–25

If Berger is correct in his identification of a parallel tablet and in his interpretation, then it means 'its door'. This makes sense, especially considering that it is in the context of 'burn' and wood would have been used only where necessary (door, rafters, etc.) in the plains of lowland Elam.⁵

The word HU-EL poses a true problem. Its Akkadian equivalent is ambiguous; Reiner interprets it as *šaltu* 'battle' and Berger as *šilu* 'hole, undermining', hence 'siege'. Both interpretations are possible and make sense by context, but neither is certain. The Middle Elamite cuneiform can be inter-

preted as (*h*)*wel* or more directly as *hul*. Furthermore, Dravidian cognates can be found for either interpretation in Akkadian. Thus, two separate, complete, and parallel interpretations are possible. At the moment it is undecidable; see 17a and b, tables 1 and 3.

TABLE A2: Proper Names

Middle Elamite		Akkadian		
#	Name in Text	Form	Meaning	Notes
3	Siyankuk.ma	Siankuk	temple sanctuary (?)	<Elamite
25	Siyankuk.pa			
21	*GAL	Napiriša	divinity, The Great One	= *GAL <El.
22	*Inšušnak	Inšušnak	divinity, Lord of Susa	<El.
24	*Kiririša	Kiririša	divinity	<El.
28	*Nahhunte	Šamaš	divinity, The Sun; sun	cf. app. II (C11)

⁵ Lambert (1965: pp. 26–27) reads this word as 'column', an inherently less likely interpretation. Stève (1967: p. 119) concurs with Berger that *haltete* corresponds to Akk *daltu* and means 'door'.

TABLE A3: The Elamite Text and its Correspondences: Words and Roots

Middle Elamite Text				Proto-Elamo-Dravidian			Proto-Dravidian			Attested Reflexes		
§	#	Word	Meaning	Notes	*Form	Meaning	No.	*Form	Meaning	DED	Tamil	Brahui
§1	1	akka	who (ever)	§242.3	iah-	{ interrogative base §541.14	A6	yaH-	interrogative base	4228	yā-, e(v)- interrogative base	a- interrogative base
	2	huhun	fortification wall	h								
§2	4 5, 8, 18	kutā ahar	arrow there	a, d	koṭ- ah-	arrow, stick { that, <i>deictic</i> §541.12	28 A3	koṭ-ay ¹ aH-	small stick, arrow that there, <i>deictic</i>	1724 1	a(v)- 'that, <i>deictic</i> base'	ē 'that yonder' (?)
6		li.n.ra	{ give, deliver; discharge; AE communicate	a, d	wil- wil-	discharge speak publicly	B6 B6	wil- wi-	expand, unfold, burst say, reveal, summon	4459 4460	wil 'to open, expand, burst' wil 'say, reveal'; wil 'say, summon'	6 }
§3	7 9	tullin ta.n.ra	breach, cut puts	h <PEI *tia, a, d	tol- it-	bore through put, place	60 2	tol- it-	perforate, bore put, place, set, lay	2907 375	tol 'to perforate, bore' itu 'to put, throw away'	7 9
§4	10 11	upat.ip tuha.n.ra	bricks tears out	e a, d	upaṭ- toḥ-	brick pound, crush	6 58	uppāṭ- ² tok-	bricklaying pound, trample	539 2917	uppārakkāran 'plasterer' tukai 'to tread, trample, mash'	10 11
§5	12 13	halte.te lumū.n.ra	its door burns	i, j a, d								12 13
§6	14, 23 15 16	āk pitir šinni	and enemy come	<peti, d	peṭ- šin-	strike in anger arrive, yield	C12 49	peṭ- in-	beat; a blow yield, bear, yeat	3601 473	in 'to bear, yeat, yield'	14, 23 15 16 }
§7	17a b	HU-EL (b)wel hul	battle (?) undermining (?)		wel- akur-	attack, subdue dig, excavation	C3A B3	wel- ² akur-	conquer, subdue dig, excavate	4522 12	wel 'conquer, overcome' akar 'dig, excavate; a moat'	17 }
19		tumpa.n.ra	performs, appears	a, d	tor-p-	appear, occur	59	tōn(p-)	appear	2942	(tōn + tu-) tōṅru 'to be visible, appear'	19
§8	20 26, 29 26b 27	hat ri-, ir-, -r, -ra -ukku- ta.k.ni	wrath he (she, it) on may . . . put	§242.3 b, c	akatu i uk- it-	rage (see tab. A4 : g) be above (see line 9)	B1 5	akatu ² uk(a)-	meanness ascend, jump up	5 477	akatu 'wickedness' i- pronoun base uka 'to ascend, soar up'	20 26, 29 26b 27
§9	29b	-šara-	under		šar-	be low	46	tār-	be low, become low	2597	tār 'to be low', Tārē 'under'	29b
30		par	descendent		par	young one	65	pār-	young one	3369	Pārpu 'fledgling, young animal'	30
31		ani	not	§243.1	al-	{ not to be §551.22	C2	al-	be not so and so	198	alla, anru 'is not (a)'	31
32		kutu.n	{ carry, bring, increase, prosper	a	kut-	bring together, join	C6	kūt-	join, assemble	1562	kūtu 'to come together, join'	32

¹ Based on forms attested in Dravidian, this form can be reconstructed only for Proto-Kolamit-Naiki.² Based on forms attested in Dravidian, this form can be reconstructed only for Proto-South-Dravidian.

The Akkadianists' disagreement on the HA-AT-TU₄ is less important. Middle Elamite *hat(t)i* is attested elsewhere and clearly means 'wrath' in context. Its literal or other meanings are less obvious. Besides the uniquely attested words, several words are used in an unexpected sense. The verb stem *li-* (word 6) normally means 'give' in Middle Elamite and 'deliver, communicate' in Achaemenid Elamite. The proper meaning in this text is probably something like 'discharge', rather than simply 'shoot'. Similarly, *kutu-* probably means 'bring (together), carry, increase' and only incidentally 'prosper'. Other minor idiomatic shifts are the use of *ta-* 'put' in place of Akkadian *nakāsu* 'breach'; see Reiner (1969: pp. 116–119).

Grammatically, the Middle Elamite text is straightforward. Only four verb forms are used, three of them only once. The recurring form, *-.n.ra* (periods indicate morpheme boundaries) is the "active" third person singular appellative and indicates an indefinite, subjunctive type of statement. With *akka* it means

'whoever (may) ____'. The verb *šinni* is used as a direct stem indicating that the verb is intimately connected with the following verb (note the use of *-ma* in the parallel form in Akkadian). *Ta.k.ni* is a "passive" precative 'may it be put', and is restored according to a well established formula. *Kutu.n* is the "active" participle with no ending used in the normal manner with *ani* 'not' to give a negative wish; see Reiner (1969: p. 94, section 7.1.1). Note the complex phrases *ri.ukku.rir* 'on him' and *ir.šara.ra* 'under him' with the double use of the pronouns (*ir, ri, ra*) fore and aft (see section 242.3 and Reiner, 1969: p. 98 for discussion), a construction which is normal for these phrases. One should remark the use of the postposition *-ma* (word 3c), the plural marker *-p* (word 10), and the second *-te* (word 12), which I would read as a possessive clitic 'its'; cf. the Achaemenid Elamite phrase *u atta.ta* 'my own father', section 233.22. The ending *-pa* (word 25c) is a plural appellative (*-p*) used with a subordination marker (*-a*; cf. Grillot, 1973). This is the Middle Elamite

TABLE A4: The Elamite Text and its Correspondences: Endings and Grammatical Morphemes

#/ Ref.	Middle Elamite Text				Proto-Elamo-Dravidian				Proto-Dravidian				Brahui (§536.1)	
	Form	Use/Name	Section	Table	*Form	Use/Name	Section	Table	*Form	Use/Name	Section	Table	Form	Use/Name
3c	-ma	locative post-position	242.22	2.1	—									
25c	-pa	(see e & f)	242.1; 243.21	2.4	—									
a	-n-	"active"	242.42	2.5	-N-	durative/ nonpast	554.11		-əN	nonpast marker	143.3		-un	adjective formative a
b	-k-	"passive"	242.42	2.5	-(ŋ)k-	mediopassive	554.21		-(ŋ)k	root augment	141.1		-ing, -eng	passive b
c	-ni	precative	242.43	2.3	-uN(?)	imperative	553.3		-uN	imperative plural	143.23			c
d	-ra	3rd, sg. ending	242.1	2.4; 2.5	-ŋtə	3rd appellative	542.4; (515)	5.3	-əŋt(ə)	3rd. masc. appel.	142.21; 143.41			d
e	-p	(3rd) plural	242.2	2.4	-p	plural	521.2; 542.5	5.1	-va	neuter pl. appel.	142.11; 143.42		-f-	pronominal plural e
f	-a	subordinator	242.51	2.3	-a	subordinator	553.2; 522.231	5.1	-a	infinitive; genitive	143.21; 142.24		-ā	genitive f
g	ir, ri	3rd. sg. pronoun	242.3	2.2	i	3rd. pronoun	536	5.2 (3s)					ĩ-	pronoun base g
h	-n	noun formative	242.21	2.4	-VN	neuter noun formative	512		-am/-an	neuter noun formative	141.22			h
i	-te	noun formative	242.21	2.4	-tə	neuter noun formative	513		-tə	neuter noun formative	141.24			i
j	-te	pron. poss. suffix	233.22	2.2	-ta	pronominal clitic	535	5.2 (3s)	t-	pronominal proclitic			-ta	pronominal clitic j

equivalent of the genitive construction; see section 242.22. The text is straightforward and uncomplicated.

The Middle Elamite version may be translated securely as follows:

Whoever would discharge [lit. give there] arrows at the wall of Siyankuk [the temple sanctuary?], make a breach there, tear out the bricks, burn its doors; and an enemy who would come and [wage battle/make siege (undermining)?] there; may the wrath of the Great One, of Inšušnak, and of Kiririša of Siyankuk be put upon him [and] may his descendants not prosper [increase?] under the Sun.

With the exception of *āk* 'and', every Middle Elamite word in this text is cognate with Dravidian, at least in part. For *huhun*, *haltete*, and *lumunra* only grammatical morphemes are cognate. In all other words, however, at least the basic root is cognate. Thus, out of 21 possible word roots (excluding proper names, repetitions, and the ambiguous HU-EL), 17 are cognate with Proto-Dravidian and can be readily reconstructed for PED. Out of 11 grammatical morphemes, only the locative *-ma* is not cognate. Thus, out of the morphemes in this one text, 81 per cent of roots are cognate, 91 per cent of grammatical morphemes are cognate, and combined 84 per cent (27 out of 32) are cognate. Even if restricted to lexical roots, about which there is no possible doubt (i.e., in section 422 rather than appendix II), the cognation rate is 48 per cent (10 out of 21). Even allowing for inevitable errors and pure chance, these data cannot be explained away. Dravidian and Elamite are cognate and closely so.

APPENDIX II.

ADDITIONAL WORDS IN COMMON BETWEEN ELAMITE AND DRAVIDIAN

The following sets of words show or seem to show some connection between Elamite and Dravidian. Many are provisional etyma not quite certain enough to be included in the main list in section 422. These sets of words are grouped according to several criteria, by their potential etymological value as probable (group A), possible (groups B and C), or rejected (groups D and E). Also, the nature of the deficiency has been categorized as either methodological (A) or phonological (B) with a last group consisting of loanwords (D). Proto-Elamo-Dravidian reconstructions are provided for groups A, B, and C; see section 421 for abbreviations and format.

A. Probable Etyma with Methodological Problems

The following terms are almost certainly good cognates between Elamite and Dravidian. However, they exhibit certain universal tendencies such as the nursery phenomenon or vowel gradation for deictics (*i* near, *a* far) so that they cannot be used as evidence to prove a cognate relationship.

A1. PED **atta* father (1-13-1)

ME *atta* father (K). RAE *atta* father, *attata* my father, *atteri* his father (PFT).

PDr **att-anrə* father, elder male of rank;

PDr **att-ay* elder female of rank:

Ta. *attan* father, elder, *attai* father's sister, mother-in-law. Kuwi *atta* aunt. (DED(S) 121)

This term is not the common word for father in Dravidian which is **app-anrə*. (DED(S,n) 133) See section 131.11.

A2. PED **amma* mother (1-16-1)

ME *amma* mother (K). AE *am[la/ma]* mother (PFT).

PDr **amm-ay* mother:

Ta. *ammai*, *ammāl*, *ammā*, *amma* mother, matron. Kol. *amma* mother. (DED(S) 154)

The common term in Dravidian; cf. PSDr **ammam* breast, nipple. (DED 152)

The following four entries constitute the set of deictics for PED. They are similar with idiosyncratic phonological patterns; see sections 131.41 and 312.0.

A3. PED **ah-* that (not far) (1-7, Dr.8)

ME *ahar* there (TZ1,K). (R)AE *am* now, *amda* presently, *amminnu* this (same), *hami* there, *hamer* at that time, *appuka*, *hapuka* formerly, *appi* these. (PFT)

PDr **av/a-* (or **aH-*) that (in sight, not far), general unspecific deictic:

This is the most common deictic in Dravidian and is attested everywhere. It is regularly used to form third person pronouns and is commonly used when deixis is not being stressed. (DED(S) 1)

A4. PED **(h)ih-* this ((7)-2-7, E1.7b, Dr.8)

ME *hi*, *i* this (TZ3,K). (R)AE *hi*, *i* this (PFT). Numerous attestations. Used as both an adjective and noun.

PDr **iv/i-* (or **iH*) this:

A basic Dravidian morpheme attested in all Dravidian languages except Brahui, where the proposed reflex *dā* takes a great deal of explanation. (DED(S,n) 351)

A5. PED **huh-* that (remote) (7-3-7-, El.7b, Dr.8)

ME *huh* thus (K), *hu(h)pe* that (TZ2,3,K). (R)AE *hupe* that (PFT). See Reiner (1969: p. 87) for the reasons that *huh* should be considered the original form.

PDr **uv/u-* (or **uH*) that yonder (extremely remote or out of sight):

This deictic is sporadically attested in all branches of Dravidian. It has become confused with the homophonous deictic PDr **uv* (**uH*) 'near you' with which it is confused in DED(S) 475. Examples from Old Tamil, Kui-Kuwi, and Kurux show that there are two distinct meanings. Kuwi seems to contrast *u* 'near you' with *hu* 'extremely far'. Kurux has *hu* for both. Emeneau (1980) has shown that both of these examples of initial *h-* are due to Munda influences.

A6. PED **iah-* who, what (2-1-7-, El.7a, Dr.8)

ME *akka* who, *akkar* any(one), *akkap* any, *appa* what; interrogative and indefinite forms (TZ3,K). (R)AE *akka* who (sg.), *akkape* who (pl.), *appa* what, *relative pronouns* (PFT). See Reiner (1969: p. 86) for the discussion of why *akka* and *appa* are basic and originally interrogatives.

PDr **yav(yāle-)* (or **yaH*) interrogative and universal base:

This form functions as a deictic in Dravidian and is attested in all the languages. (DED(S,n) 4228)

Initial *y-* is extremely rare in Proto-Dravidian. Besides this word and the first person pronouns only six words (out of over five thousand) begin with it.

The Proto-Dravidian deictic system consisted of four initial stems: **iH-* here, **uH-* near you, **aH-* there (not far, in

sight, or unspecific), **uH-* (?) (or **oH-* ?) yonder (far distant or out of sight). The forms in **uH-* are constantly confused and tend to go out of use. **aH-* and **iH-* are the most common and basic in this system. The interrogative base PDr **yaH-* parallels in function. See section 131.41.

B. Possible Etyma with Phonological Problems

The following sets of words indicate phonological correspondences which deviate from the normal pattern and which do not have enough attestations to be added as clear exceptions. They may be minor phonological patterns or chance occurrences. The first five deal with the complex relationship between PED **h* and **k*. They may be examples of PED **h*, or of a new protophoneme (**x* ?), or a special case of PED **k* which is how they have been handled as rule 9a. See sections 311.42 and 313.2. Entries B6 and B7 deal with complex etyma having attestations in both *p* and *v* in Dravidian. Entry B8 has a unique set of reflexes of PED **š*.

B1. PED **akaṭə* rage (1-9a-1-12-6, El.1c)

ME *hati*, *hat*, *hatti* fury, rage; curse [= Akk. *hattu*, *hattu*] (TZ1,2,K). Possibly a loanword from or influenced by Akkadian. See appendix I.

PSDr **akaṭə* meanness:

Ta. *akaṭu* wickedness. Ka. *agaḍu* viciousness. Te. *agaḍu* blame, fault. (DED 5)

B2. PED **akal-* to spread wide; floodplain (1-9a-1-18-, El.1c, El.7b)

ME *hal* land, ground, fertile soil; country, region, city (K,TZ3), *halli* land (K), *halat* unbaked brick (K). RAE *hal* town, *halat* clay (PFT).

PDr **akal-* to spread wide, widen:

Ta. *akal* to spread, widen, extend; go away, *akalam* width, extent, expanse. Tu. *agelu* to go apart; widen. Te. *agalu* to leave, depart. (?) Malt. *agare* to spread, increase. (DED(S,n) 9) Cf. PDr **kaḷam* open space, threshing floor. (DED(S,n) 1160)

B3. PED **akur-* to dig; excavation (1-9a-3-18-, El.1c)

ME *hul* (HU-EL) undermining (?) [= Akk. SI-EL-LU]. Interpretation of a difficult word

after Berger, 1968; see appendix I for discussion and alternatives.

PDr **akar-* to dig, excavate:

Ta. *akar* excavate, dig out; a moat.
Ma. *akir* moat. Ka. *agar*, *agur* to dig.
Te. *agaḍṭa* ditch, moat. Kol. *agul-*
to dig. (?) Malt. *arGe* id. (DED(S,n) 12)

B4. PED **kol-* to kill (9a-5-18-)

ME *halpu* to kill, strike down (K). (R)AE
halpi to die, slay (PFT).

PDr **kol-* to kill:

Ta. *kol* to kill, murder, destroy. Ka.
kol(lu) to kill, murder. Te. *kollu* to
kill. Br. *kḥalling* [Dr.4c] to strike, kill.
(DED(S) 1772)

B5. PED **kol-va-* to bring (in) (9a-5-21-, 19-1-)

A + B. ME *halma-* to harvest, bring in (the
harvest), *halte*, *haltete* harvest (K).

A. PDr **koḷ-* to seize, collect, have for
oneself:

Ta. *koḷ* to seize, acquire, *reflexive*
auxiliary. Ka. *koḷ* id. Tu. *koṇuni* id.
Te. *konu* to buy, take, hold, *reflexive*.
Konda *kor-* to purchase. Kur. *kḥōṇḍnā*
[Dr.4b] to bring together, collect,
gather. (DED(S) 1788)

B. PDr **vā(r)-* to come, happen:

Ta. *varu* (*vā*) to come, happen. Te.
vaccu (*rā-*) id. Kol. *var-* (*va-*) to
come. Konda *rā-* (*vā-*) id. Kur. *barnā*
to come, arrive. Br. *banning* (*bar-*,
ba-) to come. (DED(S,n) 4311) A
basic Dravidian word. Cf. Ta. *vāṅku*,
Ma. *vāṅṇuka* to get, receive, buy
(*<vā + ṅk ?*). (DED 4372)

The connection is through the Proto-
Dravidian combination of **kol* + *vā(r)* 'to
get and come, i.e., bring' seen in South
Dravidian as *koṇṭuvā(r)* 'id.'; cf. Kol.
kor- 'bring'. (DED(S) 1788). The Proto-
Dravidian verb root *vā-* is commonly
attested with the augment *-r*; see section
132.112. However, it is also probably seen
in PSDr **vāyku* 'to get' with the augment
-y; see section 132.14.

B6. PED **vil(i)-* to spread, discharge; sound (19-2-
21-(2), El.1b)

PEL **miḷi-* to give forth; communicate:

A. ME *li-* to give; discharge, shoot (an

arrow) [= Akk. *nasāku* throw]
(TZ1,2,3). See appendix I. AE *li-* to
deliver (PFT).

B. *li-* to communicate (PFT).

1. PDr **vil-* to expand, swell, open (as a
wound); burst:

Ta. *vil* open out, expand, burst,
separate from. Tu. *buluni* to be open.
Pa. *velgg-* to spread. Kui *vlēnda* to
rise, expand, swell. Kur. *belbelrnā*
to gape (of a wound). (DED(S) 4459).

2. PDr **piḷ-* to burst, split:

Ta. *piḷ* to burst open, be cut, be
broken; divide; cleave, rend, tear
open, *piḷa* to be split. Ka. *piḷigu* to
break, crack, burst. Tu. *pulevu* a
crack. Pa. *pil-* to crack. Kui *plinga*
to be split, *plīva* to be hatched.
(DED(S,n) 3446)

3. PSDr **vilampu* to proclaim, divulge:

Ta. *vilampu* to speak, say, proclaim,
make public, reveal. Ma. *vilampuka*
to divulge. Te. *vilambaramu* notifi-
cation, publication (<Ta.). (DED(n)
4460)

4. PSDr **viḷi-* to call, cry, shout, summon:

Ta. *viḷi* say, speak; summon, shout;
sound, speech, call. Ma. *viḷikkuka*
to call, invite. To. *piṭy-* to utter
shout of joy. Tu. *bulpuni* to cry
aloud, shout, explain. (DED(n) 4460)

5. PDr **piḷi-* to sound, call, shout:

Ta. *piḷiru* to trumpet, roar (of
elephant). Te. *pilucu* to call, invite,
name, shout. Kui *prī* cry of agony,
scream. Ga(P). *pilup-* to thunder. (?)
Malt. *pinḍe* to sound (of instruments,
animals, etc.). (DED(S) 3447)

This is a complex etymon with two
distinct, but related meanings: first, 'to
expand, burst, discharge' (note A and
1-2) and second, 'to call, shout, pro-
claim' (note B and 3-5). Both meanings
show forms with both initial *p-* and *v-* in
Dravidian.

B7. PED **vem* back (19-4-16, Dr.7)

ME *meni* then (K); *menpu* successor,
prince (TZ3). (R)AE *meni* then, after that,
after (PFT).

PDr **verin/ven* back:

Ta. *verin*, *ven*, *veṇ* back. Ka. *ben*, *bennu*, *bem* the back. Tu. *beri* id. Te. *ven(n)u* id. Kol. *ven* (pl. *veṇḍl*) id., *veṇka* behind, then. Konda *venka* afterwards. (DED(n) 4518)

A most recalcitrant word, which shows stems with and without the *-r-* and is attested in Old Tamil with a final dental *-n* (one of two such examples). At the moment its exact Proto-Dravidian form is not reconstructible. This word has many irregularities. Compare PDr **piṇ* 'back, rear, behind' (DED 3452) which is the common Dravidian word for this meaning.

B8. PED **šu* flesh (11-3)

ME *šuhi* animals (?) (K).

A. PDr **ū* flesh, meat:

Ta. *ū* flesh, meat, *ūṇ* muscle. Kui *ūju* meat, flesh. (DED(S) 626)

B. PDr **tū* flesh, meat:

Ta. *tū*, *tūvu* flesh, meat. Ma. *tuva* raw meat. Br. *sū* flesh, meat. (DED(S) 2775)

While poorly attested in Elamite, the Dravidian reflexes of this etymon are a very good confirmation of the correspondences in rule 11 of table 3.1 in that both variants are citable by this ambiguous stem. This situation exists for other Proto-Dravidian etyma; for example, PDr **ūṅku* 'to swing, hang' (DED(S,n) 629) and **tūṅku* 'to hang, swing' (DED(S,n) 2777a). Brahui *sū* may be an independent attestation of this etymon with its own reflex of PED **š*. However, other Brahui examples follow the normal pattern and clearly have *t*; cf. **šar*, section 422: 51.

C. Possible Etyma with Problems in Attestation or Semantics

The following sets are possibly cognate between Elamite and Dravidian, and they follow the rules for phonological correspondences. However, their Elamite citation or the nature of the semantics is inadequate to provide a convincing case. For many of these, the Elamite citation comes from what can only be called an educated guess. The degree of certainty varies considerably.

C1. PED **aṭaš* storeroom (1-22-1-11)

ME *araš* possession, possessor (K). AE *araš* granary (?) (PFT).

PDr **aṛay* room, chamber:

Ta. *aṛai* room, chamber, apartment. Ma. *aṛa* partition, room, treasury. Te. *aṛa*, *aṛra* room, chamber, partition. Go. *arra* a room. (DED(S,n) 272)

C2. PED **al-* not to be (1-18-)

ME *ani* not, prohibitive (TZ1,K). AE *anu* negative particle (PFT).

PDr **al-* not to be so-and-so (negative of PDr **āk-*):

This is common throughout Dravidian as one of the two basic negative verbs. The phonology is presumably through **al* + **tə* > **aṇtə* > *anə* 'it does not become'. (DED(S) 198)

C3. PED **(i)kel/wel-* to attack, conquer ((2-)9/8-4-18-)

A. ME HU-EL assault, attack (= Akk. *šaltu*) (TZ1,2,3). See appendix I for discussion.

PTaKod **vel-* to conquer, overcome, subdue, destroy:

Ta. *vel* id. Ma. *velluka* to overcome, surpass, kill. (DED 4522)

B. ME *ikel* attack, assault (TZ3), variant of HU-EL above.

PSDr **ikal* [Dr.1] enmity, battle:

Ta. *ikal* to disagree, hate, compete; enmity, hatred, battle, war. Ma. *ikal* fight. Tu. *ija* trouble, impurity. (DED 353)

C. (R)AE *kelu-* to govern (?), *kellira* commander (?) (PFT).

PDr **kel-* to conquer, win, overcome:

Ta. *keli* to conquer, overcome. Ka. *gel* to win, gain, conquer. Te. *gelucu* to win, gain, escape. Kol. *gell-* to win. Konda *gels-* to win, escape. (DED(S,n) 1641)

This set of forms is one of the more complex in the corpus. Middle Elamite cites two forms which seem to be variants (or synonyms?). This is further confused since the value of the cuneiform signs is

not certain in this case. Then, the Achaemenid inscriptions have another form which probably is related. On the Dravidian side, three separate verbs exist and all three have reflexes in Tamil. These are phonologically similar to the degree that they are easily relatable and have very similar meanings. Then, the three variants in Elamite line up perfectly in the phonological correspondences with the three variants in Dravidian. The matter is not fully explained, but the implications are of interest. There seem to be three separate, but closely related forms in PED, each of which has reflexes in both Dravidian and Elamite. Internal reconstruction would favor a form something like **hwel* as the Pre-PED form, but there is some evidence that **ikel* may be the original form; see section 536.12. It is possible that a simpler explanation, perhaps stemming from a clarification of the Elamite writing system, would favor some other form. In any case, this is not the type of word set which gets borrowed. Such confusions can easily arise when one language borrows from another, but not as a completely parallel shared system. This is reminiscent of the ablaut series in Germanic where English *sing*, *sang*, *sung*, *song* correspond to German *singen*, *sang*, *gesungen*, and *Gesang*. Such a system has a strong presumption of being cognate for the simple reason that it is beyond chance, and no language would borrow such pointless complexity. Whether the reason for this variation in PED will ever be found is another question.

C4. PED **hun* water; drink (7-3-14)

ME *hun* water (K).

PDr **uṇ-* to drink, eat a meal:

Ta. *uṇ* to eat or drink, take food.
 Ka. *uṇ* to eat a meal. Kol. *un-* to drink. Pa. *un-* (*uṇḍ-*) id. Kur. *ōnnā(ōṇḍas)* to drink, eat (rice). Malt. *ōne(ōṇḍ-)* to drink; be colored. Br. *kuning* to eat, drink, bite [*k* < Sindhi?]. (DED(S,n) 516). Cf. Ka. *uni* to be soaked, lie steeped. Te. *unupu* to dye clothes (DED 624)

C5. PED **hut-* to be numerous, abundant (7-3-22-)

ME *hur-* to blossom, flower, augment (oneself), bless (K), *hurpi* bloom, fruit (?) (K).

PDr **ur-* to be numerous, increase:

Ta. *uru* (*ur-*) to be numerous, *uruttu* to increase, *urai* to increase, grow. Ka. *uraḷi* a mass, multitude. Te. *uravu* abundance. (DED(S) 609)

C6. PED **kuṭ-* to bring together (9-3-12-)

ME *kudu-*, *kutu-* to carry, bring; prosper (TZ1,2,3), *kutu* prosper, grow (K) [= Akk. *ešēru* prosper]. See appendix I. Cf. AE *kudda* and, furthermore (PFT).

PDr **kūṭ-* to join, meet, assemble:

Ta. *kūtu* to come together, join, meet, assemble, *kūta* together with, in addition to. Tu. *kūḍuni* to join, unite, copulate, assemble, *kūda* along with. Te. *kūḍu* to meet, join, copulate, *kūḍa* along with. Pa. *kūr er-* to assemble. Konda *kūr* to join, meet, assemble, *kūraṇa* together. Kur. *khōṇḍnā* [Dr.4b] to bring together, collect. (DED(S) 1562)

C7. PED **keṭ-* to lie down (9-4-12-, El.6, Dr.2)

AE *kiti* a place for keeping horses, cattle, etc.; a stable (?) (PFT).

PDr **keṭ-* to lie down:

Ta. *kiṭa* to lie, lie down (disorderly), *kiṭai* lying down. Ma. *kiṭakka* bed. Kod. *kaḍake* bed. Te. *keḍayu* to fall, fall over, sink. Go. *ker-* to fall (at the feet). (DED(S) 1277)

C8. PED **cip* door (10-2-15, El.4)

ME *sip* gate (K). RAE *zip* door (PFT).

PSDr **cīmppa* bolt for locking door, sluice gate: Ta. *cīppu* bolt, wooden brace to a door driven into the ground when bolting, shutter of a sluice. Ma. *cīppu* bolt pushed up from below, *cīrppu* bolt, bar. Tu. *cīmpi*, *cīmpu*, *cīmpu* a bolt, bar, latch. (DED 2155)

C9. PED **cel-* to go on/away, pass (10-4-18-, El.4, Dr.5c)

(R)AE *zila* so, *hi zila* thus, accordingly, as follows, then, *sap zila*, *zila sap* just as (PFT).

PDr **cel-* to go (away); pass:

Ta. *cel* to go, flow, pass, occur, *celuttu* to cause to go, proceed, dispatch. Ka. *sal* (sand-) to enter, engage in, associate with, agree to, pass. Te. *cellu* to pass (as time), pass away; be current, *canu* (cañt-) to go, depart, pass, be fit. Konda *sol* (son-, *soṛh*) to go. Kui *salba* to go, depart. Kur. *calrnā* to continue, go on, be current, go away. (DED(S) 2286)

C10. PED **tur-* to fill up (13-3-17-)

ME *tur* interior, inside, emotion (K).
Cf. *tur* victory ? (TZ2).

PDr **tūr-* to fill up:

Ta. *tūr* to be filled up, be closed, choked up; fill up, close up, hide, cover. Kur. *cūrnā* to get obstructed, blocked up. (DED 2787)

C11. PED **nah-* to shine forth (14-1-7-, Dr.8)

ME *Nahunte* Sun God [= Akk. *Šamaš*] (TZ1, K). See appendix I. OE *nahute* sun (L).

PDr **nak-* (or **naH-*) to smile; glitter, shine:

Ta. *naku* to laugh, smile; shine, glitter. Te. *nagu* to smile, laugh, *navvu* to laugh, joke, smile. Pa. *nav-* to laugh. Ga. *nag-* id. (DED 2944)

C12. PED **peṭ-* to strike (against) (15-4-12-, El.6)

ME *peti* enemy (K). *pitir* enemy [= Akk. *nakru*] (TZ1,2,3). See appendix I. RAE *bet* battle(s) (PFT).

PDr **peṭ-* to beat, strike:

Ko. *peṭ* beating. Ka. *peṭṭu* to beat. Te. *peṭṭu* blow, stroke, knock; to hit, beat. Kol. *peṭṭ* a blow. (DED 3601)

C13. PED **peṭ-* to gather, pick up (15-4-22-, El.6)

AE *pir* in addition (?), (all) together, *pirru* together (PFT).

PDr **per-ukk-* to gather, glean:

Ta. *perukku* to gather, pick up, *porukku* to pick up, glean, select. Kol. *petk-* to pick up. Go. *parrānā* *pehkānā* to pick up, gather. Konda *per* (*perht-*) to pick, pick up, collect.

Kur. *pesnā* (*pett-*) to gather up, pick up, glean, choose. (DED(n) 3623)

C14. PED **por* heap, pile (15-5-17)

ME *pur* base, foundation, pedestal (K).

PDr **poray* hill, hilltop:

Ta. *porai*, *porrai* mountain, hill. Ma. *porra* slight elevation in rice grounds. Kol. *pode* high, up, the top. Go. *parrō* on top. Nk.(Ch.) *por* hill, the top. Kur. *partā* mountain, hill. (DED(S,n) 3730) Cf. DED(S) 3756, Ka. *bōre* hill, hillock.

Cf. PDr **pōr* heap:

Ta. *pōr* heap (of grain), accumulation. Ka. *poraḷi* heap, mass, assemblage. Ga.(P.) *pōrp* heap, stack of grain. Konda *pōri* heap. (DED(S) 3752)

C15. PED **pol-* to be ruined (15-5-18-)

ME *pulu* to destroy, break to pieces (K).

PDr **pol-* to perish, be destroyed:

Ta. *poṇru* to perish, be ruined, die, fail, *pular* to fade, wither, faint, become weak. Ma. *poliyuka* to be extinguished. Te. *poliyu* to die, be destroyed, be spoiled. Kur. *polnā* to be unable, fail. Malt. *pole* to be unable, helpless, vanquished. (DED(S) 3733)

C16. PED **miṭ* life, vital force (16-2-12)

ME *mit* power or symbol of life, heart (K). Cf. *mitik* fighter, warrior (K).

PDr **miṭ-* vital force, strength:

Ta. *miṭal*, *miṭaṇ* strength, pride, conceit, *miṭukkan* strong powerful man, *miṇṭu* to be hard, exultant, vain, join battle, talk harshly. Ka. *miḍuku* to become conscious, grow animated, become lively, be alive, move, *miṇḍa* man of high position, hero. Te. *miḍuku* to live, subsist. *miṇḍa* great, high, male. Nk. *mindgi* a young man. (DED(S) 3970)

C17. PED **mel-(k)-* to overturn (16-4-18-(9)-)

ME *melk-* to demolish, pull down, destroy (TZ3,K).

PDr **mel-* to overturn:

Ta. *mīlir* to be upset, turned upside down. Pa. *milyg-* to be overturned, *milkip-* to overturn. Konda *mer, mel* to fall over. Kui *mli* to change. Kur. *mulukhnā* to overturn, *mulukhrnā* to get overturned. (DED(S,n) 3988)

C18. PED **va-* to come (in), bring in (19-1-)

ME *ma-* to bring in, harvest, get in, place near oneself (K). Cf. *hal-ma* to harvest (K).

PDr **vā(r)* to come:

Ta. *var-* (*vār, vā, va*) to come, happen. Ka. *bar* to come, arrive. Kol. *var-* (*va-*) id. Kur. *barnā* id. Br. *banning* (*bar-, ba-*) to come. (DED(S,n) 4311)

C19. PED **vaš-əN* site, ground, earth (19-1-11-6-16)

ME *mašum* site, location, place, spot? new or level ground? (TZ2,3). *mašum* procession street (?) (K).

PSDr **vayyam* earth, world:

Ta. *vaiyam* earth, *vaiy-akam* earth, world. Ma. *vayyam* id. (DED(S) 4572)

C20. PED **viṭ-* to leave (behind), let go (19-2-12-, El.6)

ME *mete-* to lead, guide, take off, extract, go away (K). AE *mite-* to go forth (PFT).

PDr **viṭ-* to leave (behind); let go, release:

Ta. *viṭu* to leave, quit, forsake; let go, dispatch; liberate, release; send out, discharge, throw, pour; permit, allow. Ka. *biḍu* to let loose, discharge, throw. Te. *viḍu* to be loosened, separate, part with, *veḍalu* to go or come out, set forth, start. Go. *vir-* to leave, abandon. Konda *ris-* (-*t-*) [Dr.3] to leave, abandon; release, liberate. Br. *biṭing* to throw (off); come down, dismount (Sw.); let go. (DED(S,n) 4419)

D. Probable Loanwords from Elamite into Dravidian Languages

Two words show a strong probability of being loans from Achaemenid Elamite into South Dravidian. These words are long, are precisely related in meaning, and do not follow the normal phonological correspondences.

D1. AE *martukkaš* a charge against herds amounting to about one tenth paid to the herdsman (PFT).

PSDr **maṭa(y)k-* to engage, hire:

Ta. *maṭakku* to engage as a servant, to secure for oneself an article of cargo. Ka. *maḍagu, maḍaṅgu* to lay down, put; take into one's service, procure and keep, hire. Tu. *maḍaguni* to lay, put down, place (<Ka.?). To. *moḍx-* to keep non-Toda lover. (DED(n) 3795)

The South Dravidian terms have a common idea of hiring or engaging. This is often a brokering type of relationship, on a long term, noncash basis. Such a notion of fee-in-kind is directly relatable to the Elamite term. The *rt : ṭ* relationship has not been borne out by other data. Basically, the phonological fit is too long and too good, the semantic correspondence too specific and too technical, for this pair of words to be cognate. They must be either freak similarities or loanwords. The loanword hypothesis has interesting implications for cultural contact, but there are no inherent improbabilities of contact by sea.

D2. (R)AE *kuti-* to carry (away), bear, uphold, *kutira* bearer (PFT).

PSDr **kutiray* horse:

Ta. *kutirai* horse. Ma. *kutira* id. To. *kīṭīr* id. Ka. *kudire* id. Kod. *kudire* id. Tu. *kudarè* id. Te. *kudira* id. (<SDr). (DED(S,n) 1423)

This term is the normal and widespread word for 'horse' in South Dravidian languages. However, except for loans (cf. Telugu), it is restricted to South Dravidian. Telugu normally has *gurramu* which attests the Central Dravidian form. Burrow (1972: pp. 18–25) has shown convincingly that the word for *horse* in Proto-Dravidian is attested only by Old Tamil *ivulī* and Brahui *hullī* (Den S²9A). This matter can be clarified by the history of the domestication of the horse. Only one horse, the onagar (*Equus hemionus*), is native to South Asia. The domesticated horse (*E. caballus*) is native to the Eurasian steppes and was not introduced into South Asia until after 2000 B.C. Thus, any Proto-Dravidian term must refer to a wild horse (presumably *E. hemionus*) and this is undoubtedly what PDr **ivulī* referred to. With the introduction of the already domesticated *E. caballus* to South Asia, new terms in each branch of Dravidian came

into use. Only Brahui kept the old term with a new meaning. SDr **kutiray* and CDr **gurram* almost certainly have nothing to do with one another.

The word *kutiray* has been a problem in South Dravidian for many years. It seems to be composed of a stem *kuti-* with an ending *-ray*. The stem *kuti-* is no great problem since it exists as a verb meaning 'jump, leap, frolic' (DED(S,n) 1419) which could be connected with a horse. However, *-ray* has been a problem. It means nothing and has no connection or parallel in a highly agglutinative system where everything should have a meaning. Proto-South-Dravidian admitted no nouns in final *-a* (as Tamil still does not). Any loan noun would automatically have changed such an ending to *-ay* or *-am*. Thus, *kutiray* is precisely the form which would be expected if South Dravidian borrowed Elamite *kutira*. If they were cognate, they could not be so close in form. Given the meaning, which is ideal for the domesticated horse, and the phonology, as well as the archaeological evidence, there is little doubt that *kutiray* is an Elamite loanword into South Dravidian.

These two loanwords seem to point to a connection, either direct or indirect, between Elam and the region where the South Dravidians were then living. Given the sailing technology of the second millennium B.C., there is no reason not to accept the direct sea trade connection. That such a trade is likely to have existed is one of the interesting and significant results of this work.

E. Rejected Etyma from Previously Published Sources

The following pairs of words which were previously suggested as possible PED etyma in McAlpin 1974: pp. 93–96 and Diakonoff 1967: p. 112 have been rejected. For the first three entries (E1–E3), this is due to the total lack of support for the hypothesis that the Dravidian retroflexes corresponded to the Elamite clusters of *r* plus a stop; see McAlpin 1974: p. 94, rules 22 and 38. Entry E4 is phonologically aberrant and semantically improbable. Entries E5 through E9, while not impossible, currently do not have a close enough specification or connection to be seriously considered as etyma. Diakonoff's (1967: p. 112) entries (E10–E13) were early attempts which further inquiry has not sustained, although E13 does show some interesting connections with Brahui. Other suggestions that he made have been incorporated into this work; see section 422: 17, 63, 68, and 69.

- E1. AE *tarti-* conceal : PDr **aṭ-* shut (McAlpin 1974, #15).
- E2. AE *turna-* know : PDr **uṇar-* perceive (#17).
- E3. AE *cirna-* milk : PDr **ciṇunk-* ooze (#44).
- E4. (R)AE *sunki* king : PDr **cukkay* star (#54).
- E5. AE *anka* if : TaMa. *-kil* if (#49b).
- E6. AE *kuti-* carry : PDr **kuti-* jump, trot (#38). See entry D2.
- E7. AE *lilu-* come forth : PDr **veḷi* be open, drive at (#48).
- E8. AE *teELte* a kind of fruit : PDr **teḷ* thinness, fineness, delicateness (#56).
- E9. AE *pul* a kind of fruit : PDr **puḷ* sour (#57).
- E10. El. *ketu-* destroy [source?] : Dr. *keṭu-* perish (Diakonoff 1967: p. 112).
- E11. El. *tiri-, turu-* speak : Dr. *teri-* be recognized (loc. cit.).
- E12. El. *titu-* to lie [source?] : Dr. *ti* evil (loc. cit.).
- E13. El. *tunu-* give : Dr. *tir-* [source?], Br. *tir-, tin-* give (loc. cit.). This remains an interesting link between Elamite and Brahui. Unfortunately, it is not supported elsewhere in Dravidian.

BIBLIOGRAPHY

- ADAMS, ROBERT M. 1960. "The Origin of Cities." *Scientific American* 203, 3 (September, 1960): pp. 153–168.
- . 1962. "Agriculture and Urban Life in Early Southwestern Iran." *Science* 136: pp. 109–122.
- ADAMS, ROBERT MCC., and HANS J. NISSEN. 1972. *The Uruk Countryside: The Natural Setting of Urban Societies* (Chicago).
- AGESTHIALINGOM, S., and S. SAKTHIVEL. 1973. *A Bibliography of Dravidian Linguistics*. Dept. of Linguistics, Pub. 30 (Annamalainagar).
- ANDRONOV, M. S. 1961. "Hints Regarding the Origin of the Present Tense Suffix *kinr* in Tamil." *Tamil Culture* 9: pp. 145–150.
- . 1964. "Lexicostatistic Analysis of the Chronology of Disintegration of Proto-Dravidian." *Indo-Iranian Jour.* 7: pp. 170–186.
- . 1968. *Two Lectures on the Historicity of Language Families*. Dept. of Linguistics, Pub. 15 (Annamalainagar).
- . 1970. *Dravidian Languages* (Moscow).
- . 1976a. "Dravidian Numerals: An Etymological Study." *Intl. Jour. of Dravidian Linguistics* 5: pp. 5–15.
- . 1976b. "Case Suffixes in Dravidian: A Comparative Study." *Anthropos* 71: pp. 716–737.
- . 1976c. "The Negative in Dravidian: A Comparative Study." *Jour. of Tamil Studies* 10: pp. 1–12.
- . 1977a. "Pronominal Suffixes in Dravidian: A Comparative Study." *Intl. Jour. of Dravidian Linguistics* 6: pp. 97–114.

- . 1977b. "Hypercorrection in Dravidian." *Indian Linguistics* 38: pp. 221–226.
- . 1979. "Verbals in Dravidian: A Comparative Study." *Intl. Jour. of Dravidian Linguistics* 8: pp. 52–70.
- ANNAMALAI, E. 1968. "Onomatopoeic Resistance to Sound Change in Dravidian." *Studies in Indian Linguistics*. Edited by Bh. Krishnamurti (Poona), pp. 15–19.
- . 1969. "Adjectival Clauses in Tamil." Ph.D. dissertation, Univ. of Chicago.
- ANTTILA, RAIMO. 1972. *An Introduction to Historical and Comparative Linguistics* (New York).
- ASHER, R. E. 1968. "Existential, Possessive, Locative and Copulative Sentences in Malayalam." *The Verb 'Be' and Its Synonyms*. Foundations of Language Supplementary Series. Edited by J. W. M. Verhaar (Dordrecht) 6, 2: pp. 88–111.
- BENDER, MARVIN J. 1969. "Chance CVC Correspondences in Unrelated Languages." *Language* 45: pp. 519–531.
- BERGER, P. R. 1967. "Akkadisches aus Elam: Zu dem akkadischen Passus eines elamischen Backsteins aus Tchoga Sambil." *Orientalia Nova* 36: pp. 421–425.
- BHAT, D. N. S. 1971. *The Koraga Language* (Poona).
- . 1976. "Certain Developmental Tendencies of the Dravidian Verb." *Intl. Jour. of Dravidian Linguistics* 5: pp. 249–258.
- BLOCH, JULES. 1946. *Structure grammaticale des Langues dravidiennes* (Paris).
- . 1954. *The Grammatical Structure of Dravidian Languages*. Translated by R. G. Harshe (Poona).
- BORK, FERDINAND. 1925. "Elam (B. Sprache)." *Reallexikon der Vorgeschichte* 3: pp. 70–83.
- BRAIDWOOD, ROBERT J. 1960. "The Agricultural Revolution." *Scientific American* 203, 3 (September, 1960): pp. 131–148.
- BRAY, DENYS DE S. 1909. *The Brahui Language* 1 (Calcutta); 2–3 (Delhi, 1934).
- BRICE, WILLIAM C. 1962. "The Writing System of the Proto-Elamite Account Tablets of Susa." *Bull. of the John Rylands Library, Manchester* 45: pp. 15–39.
- BRIGHT, WILLIAM. 1966. "Dravidian Metaphony." *Language* 42: pp. 311–322.
- . 1975. "The Dravidian Enunciative Vowel." *Dravidian Phonological Systems*. Edited by H. F. Schiffman and C. M. Eastman (Seattle), pp. 11–46.
- BURROW, T. 1943. "Dravidian Studies III: Two Developments of Initial *k* in Dravidian." *Bull. of the School of Oriental and African Studies* 11: pp. 122–139.
- . 1944. "Dravidian Studies IV: The Body in Dravidian and Uralian." *Bull. of the School of Oriental and African Studies* 11: pp. 328–356.
- . 1955. *The Sanskrit Language* (London).
- . 1968a. "The Treatment of Primitive Dravidian *-ṛ-* in Kurux and Malto." *Studies in Indian Linguistics*. Edited by Bh. Krishnamurti (Poona), pp. 62–69.
- . 1968b. *Collected Papers on Dravidian Linguistics*. Dept. of Linguistics, Pub. 13 (Annamalainagar).
- . 1972. "The Primitive Dravidian Word for the Horse." *Intl. Jour. of Dravidian Linguistics* 1: pp. 18–25.
- BURROW, T., and S. BHATTACHARYA. 1953. *The Parji Language, a Language of Bastar* (Hertford).
- . 1970. *The Pengo Language; Grammar, Texts, and Vocabulary* (Oxford).
- BURROW, T., and M. B. EMENEAU. 1960. *A Dravidian Etymological Dictionary* (Oxford).
- . 1969. *A Dravidian Etymological Dictionary: Supplement* (Oxford).
- . 1972. "Dravidian Etymological Notes." *Jour. of the Amer. Oriental Soc.* 92: pp. 397–418, 475–491.
- CALDWELL, ROBERT. 1856. *A Comparative Grammar of the Dravidian or South-Indian Family of Languages* (London); 1875. Revised by author (2nd ed., London); 1913. Revised and abridged by J. L. Wyatt and T. Ramakrishna Pillai (3rd ed., London); 1961. Resetting of 3rd edition (4th ed., Madras); 1974. Photoreprint of 3rd edition (5th ed., New Delhi).
- CAMERON, GEORGE G. 1936. *History of Early Iran* (Chicago).
- . 1948. *Persepolis Treasury Tablets*. Oriental Institute Publications 65 (Chicago).
- . 1973. "The Persian Satrapies and Related Matters." *Jour. of Near Eastern Studies* 32: pp. 47–56.
- Census of India. 1971. *Language Handbook on Mother Tongues in Census*. Census Centenary Monograph 10 (New Delhi).
- CHILDE, V. GORDON. 1950. "The Urban Revolution." *Town Planning Review* 21: pp. 3–17.
- CHOMSKY, NOAM, and NORRIS HALLE. 1968. *The Sound Pattern of English* (New York).
- DAS, A. SISIR KUMAR. 1973. *Structure of Malto*. Dept. of Linguistics, Pub. 32 (Annamalainagar).
- DESHPANDE, MADHAV M., and PETER EDWIN HOOK, eds. 1979. *Aryan and Non-Aryan in India*. Michigan Papers on South and Southeast Asia 14 (Ann Arbor).
- DIAKONOFF, I. M. 1967. "Elamskij Jazyk." *Jazyki dernej perednej Azii* (Moscow): pp. 85–112.
- DROESE, ERNEST. 1884. *Introduction to the Malto Language* (Agra).
- EMENEAU, M. B. 1955. *Kolami, A Dravidian Language*. Univ. of Calif. Pubs. in Linguistics 12 (Berkeley).
- . 1957. "Numerals in Comparative Linguistics (With Special Reference to Dravidian)." *Bull. of the Inst. of History and Philology, Academia Sinica* 29: pp. 1–10.
- . 1962. *Brahui and Dravidian Comparative Grammar*. Univ. of Calif. Pubs. in Linguistics 27 (Berkeley).
- . 1967a. *Dravidian Linguistics, Ethnology and Folktales—Collected Papers*. Dept. of Linguistics, Pub. 8 (Annamalainagar).
- . 1967b. "The South Dravidian Languages." *Jour. of the Amer. Oriental Soc.* 87: pp. 365–412.
- . 1970a. "Kodagu Vowels." *Jour. of the Amer. Oriental Soc.* 90: pp. 145–158.
- . 1970b. *Dravidian Comparative Phonology: A Sketch*. Dept. of Linguistics, Pub. 22 (Annamalainagar).
- . 1971. "Kodagu and Brahui Developments of Proto-Dravidian **ṛ*." *Indo-Iranian Jour.* 13: pp. 176–198.
- . 1973. Review of *Comparative Dravidian Phonology* by Kamil Zvelebil. *Linguistics* 107: pp. 77–82.
- . 1975. "Studies in Dravidian Verb Stem Formation." *Jour. of the Amer. Oriental Soc.* 95: pp. 1–24.
- . 1980. "Indian Demonstrative Pronominal Bases: A Revision." *Proceedings of the Sixth Annual Meeting of the Berkeley Linguistics Society* (Berkeley): pp. 20–27.
- FAIRSERVIS, WALTER A., JR. 1976. *Excavations at the Harappan Site of Allahdino I: Seals and Other Inscribed Material*. Papers of the Allahdino Expedition 1976, 1 (New York).
- FILLMORE, CHARLES J. 1968. "Case for Case." *Universals in Linguistic Theory*. Edited by E. Bach and R. Harms (New York), pp. 1–88.
- FISHER, W. B., ed. 1968. *The Cambridge History of Iran* 1 (Cambridge).
- GADD, C. J. 1971. "The Dynasty of Agade and the Gutian Invasion." *The Cambridge Ancient History* (2 v., 3rd ed., Cambridge) 1, 2: pp. 417–463.
- GHIRSHMAN, R. 1951. *L'Iran des Origins à l'Islam* (Paris).

- GLASOV, YURI Y. 1968. "Non-Past Tense Morphemes in Ancient Tamil." *Studies in Indian Linguistics*. Edited by Bh. Krishnamurti (Poona), pp. 103-109.
- GOPINATHAN NAIR, B. 1979. "On Quantitative Alternations in Dravidian." *Intl. Jour. of Dravidian Linguistics* 8: pp. 32-45.
- GREENBERG, JOSEPH H. 1963. *Universals of Language* (Cambridge).
- GRIERSON, G. A. [and S. KONOW]. 1906. *Munḍa and Dravidian Languages*. Linguistic Survey of India 4 (Calcutta).
- GRILLOT, FRANÇOISE. 1970. "À propos de la Notion de subordination dans la syntaxe Elamite." *Jour. Asiatique* 258: pp. 213-236.
- . 1973. "La Postposition génitive -na en Elamite." *Cahiers de la délégation archéologique française en Iran* 3: pp. 115-169.
- HAHN, F. 1911. *Kurukh Grammar* (Calcutta).
- HALLOCK, RICHARD T. 1956. Review of *The Phonology and Morphology of Royal Achaemenid Elamite* by Herbert H. Paper. *Jour. of the Amer. Oriental Soc.* 76: pp. 43-46.
- . 1958. "Notes on Achaemenid Elamite." *Jour. of Near Eastern Studies* 17: pp. 256-262.
- . 1959. "The Finite Verb in Achaemenid Elamite." *Jour. of Near Eastern Studies* 18: pp. 1-19.
- . 1960. "A New Look at the Persepolis Treasury Tablets." *Jour. of Near Eastern Studies* 19: pp. 90-100.
- . 1962. "The Pronominal Suffixes in Achaemenid Elamite." *Jour. of Near Eastern Studies* 21: pp. 53-56.
- . 1965. "The Verbal Nouns in Achaemenid Elamite." *Studies in Honor of Benno Landsberger on his Seventy-Fifth Birthday, April 25, 1965*. The Oriental Inst. of the Univ. of Chicago, Assyriological Studies (Chicago) 16: pp. 121-125.
- . 1969. *Persepolis Fortification Tablets*. Oriental Inst. Pubs. 92 (Chicago).
- . 1973. "On the Middle Elamite Verb." *Jour. of Near Eastern Studies* 32: pp. 148-151.
- HAMP, ERIC P. 1957. "Elamite Phonology and Morphology." *Word* 13: pp. 499-513.
- HANSMAN, JOHN. 1972. "Elamites, Achaemenians and Anshan." *Iran* 10: pp. 101-125.
- HART, GEORGE L. 1976. *The Relationship Between Tamil and Classical Sanskrit Literature*. History of Indian Literature. Edited by J. Gonda (Wiesbaden) 10, 2.
- HINZ, WALTHER. 1971. "Persia c. 2400-1800 B.C." *The Cambridge Ancient History* (2 v., 3rd ed., Cambridge) 1, 2: pp. 644-680.
- . 1972. *The Lost World of Elam* (London).
- . 1973. "Persia c. 1800-1550 B.C." *The Cambridge Ancient History* (2v., 3rd ed., Cambridge) 2, 1: pp. 256-288.
- HUART, C., and L. DELAPORTE. 1943. *L'Iran antique—Elam et Perse et la civilisation iranienne* (Paris).
- HÜSING, GEORG. 1901. "Die Urbevölkerung Irans." *Keleti Szemle* 2: pp. 161-167.
- . 1910. "Die elamische Sprachforschung." *Memnon* 4: pp. 5-40.
- ISRAEL, M. 1975. "Appellative Verbs in Dravidian Languages." *Indian Linguistics* 36: pp. 268-275.
- . 1977. "Demonstratives in Kūbi, Kūṣi and Kūvi." *Intl. Jour. of Dravidian Linguistics* 6: pp. 223-232.
- JAKOBSON, ROMAN. 1971. "Shifters, Verbal Categories, and the Russian Verb." *Selected Writings* (3 v., The Hague) 2: pp. 130-147.
- KENT, ROLAND G. 1953. *Old Persian: Grammar, Texts, Lexicon* (2nd ed., New Haven).
- KÖNIG, FRIEDRICH WILHELM. 1965. *Die elamischen Königsinschriften*. Archiv für Orientforschung 16 (Graz).
- KRISHNAMURTI, BHADRIRAJU. 1955. "The History of Vowel-Length in Telugu Verbal Bases." *Jour. of the Amer. Oriental Soc.* 75: pp. 237-252.
- . 1958a. "Alternations i/e and u/o in South Dravidian." *Language* 34: pp. 458-468.
- . 1958b. "Proto-Dravidian *z." *Indian Linguistics* 19: pp. 259-293.
- . 1961. *Telugu Verbal Bases: A Comparative and Descriptive Study*. Univ. of Calif. Pubs. in Linguistics 24 (Berkeley).
- . 1963. Review of *Dravidian Etymological Dictionary* by T. Burrow and M. B. Emeneau. *Language* 39: pp. 556-564.
- . 1968a. "Dravidian Personal Pronouns." *Studies in Indian Linguistics* (Poona), pp. 189-205.
- . 1968b. *Studies in Indian Linguistics* (Professor M. B. Emeneau Saṣṭipūrti Volume) (Poona).
- . 1969a. "Comparative Dravidian Studies." *Linguistics in South Asia*. Current Trends in Linguistics. Edited by T. Sebeok (The Hague) 5: pp. 309-333.
- . 1969b. *Kōṇḍa or Kūbi, a Dravidian Language: Texts, Grammar, and Vocabulary* (Hyderabad).
- . 1971. "Causative Constructions in Indian Languages." *Indian Linguistics* 32: pp. 18-35.
- . 1974. "Gender and Number in Proto-Dravidian." *Intl. Jour. of Dravidian Linguistics* 4: pp. 328-350.
- . 1975. Review of *Dravidian Comparative Phonology: A Sketch* by M. B. Emeneau. *Jour. of the Amer. Oriental Soc.* 95: pp. 312-313.
- . 1976. Review of *Comparative Dravidian Phonology* by K. Zvelebil. *Lingua* 39: pp. 139-153.
- . 1978. "Areal and Lexical Diffusion of Sound Change." *Language* 54: pp. 1-20.
- KUMARASWAMI RAJA, N. 1969. *Post-Nasal Voiceless Plosives in Dravidian*. Dept. of Linguistics, Pub. 18 (Annamalainagar).
- LABAT, RENÉ. 1951. "Structure de la langue Elamite (état présent de la question)." *Conférences de l'Institut de l'Université de Paris* (Paris) 10: pp. 23-42.
- . 1975a. "Elam c. 1600-1200 B.C." *The Cambridge Ancient History* (2v., 3rd ed., Cambridge) 2, 2: pp. 379-416.
- . 1975b. "Elam and Western Persia c. 1200-1000 B.C." *The Cambridge Ancient History* (2v., 3rd ed., Cambridge) 2, 2: pp. 482-506.
- LADEFOGED, PETER. 1971. *Preliminaries to Linguistic Phonetics* (Chicago).
- LAMBERG-KARLOVSKY, C. C. 1971. "The Proto-Elamite Settlement at Tepe Yahya." *Iran* 9: pp. 87-95.
- . 1972a. "Trade Mechanisms in Indus-Mesopotamian Interrelations." *Jour. of the Amer. Oriental Soc.* 92: pp. 222-229.
- . 1972b. "Tepe Yahya 1971: Mesopotamia and the Indo-Iranian Borderlands." *Iran* 10: pp. 89-100.
- . 1973. "Urban Interaction on the Iranian Plateau: Excavations at Tepe Yahya 1967-1973." *The Proceedings of the British Academy* 59: pp. 1-43.
- . 1978. "The Proto-Elamites on the Iranian Plateau." *Antiquity* 52: pp. 114-120.
- LAMBERT, MAURICE. 1965. "Les Inscriptions Elamites de Tchogha-Zanbil." *Iranica Antiqua* 5: pp. 18-38.
- . 1974. "Deux Textes Elamites du III^e millénaire." *Revue d'Assyriologie* 68: pp. 3-14.
- LE BRETON, LOUIS. 1957. "The Early Periods at Susa, Mesopotamian Relations." *Iran* 19: pp. 79-124.

- LINDHOLM, JAMES M. 1978. "Nested Case Relations and the Subject in Tamil." *Intl. Jour. of Dravidian Linguistics* 7: pp. 75-98.
- MCALPIN, DAVID W. 1973. "The Malayalam Verb Phrase in a Generative Matrical Framework." *Intl. Jour. of Dravidian Linguistics* 11: pp. 252-273, 348-397.
- . 1974. "Toward Proto-Elamo-Dravidian." *Language* 50: pp. 89-101.
- . 1975a. "Elamite and Dravidian: Further Evidence of Relationship." *Current Anthropology* 16: pp. 105-115.
- . 1975b. "The Morphophonology of the Malayalam Noun." *Dravidian Phonological Systems*. Edited by H. F. Schiffman and C. M. Eastman (Seattle), pp. 206-223.
- . 1979. "Linguistic Prehistory: The Dravidian Situation." *Aryan and Non-Aryan in India*. Michigan Papers on South and Southeast Asia, edited by M. M. Deshpande and P. E. Hook (Ann Arbor) 14: pp. 175-189.
- MAHADEVAN, IRAVATHAM. 1973. "Method of Parallelisms in the Interpretation of the Proto-Indian Script." *Proceedings of the Third Intl. Conference Seminar, Paris, 1970, of the Intl. Assoc. of Tamil Research* (Pondichéry), pp. 44-55.
- MALLOWAN, MAX. 1969. "Elamite Problems." *Proceedings of the British Academy* 55: pp. 255-292.
- MARLOW, ELLI PUDAS. 1974. "More on the Uralo-Dravidian Relationship: A Comparison of Uralic and Dravidian Etymological Vocabularies." Ph.D. dissertation, Univ. of Texas at Austin.
- MERIGGI, PIERO. 1971. *La scrittura proto-elamica* (Roma).
- OBERLANDER, T. M. 1968. "The Origin of the Zagros Defiles." *The Cambridge History of Iran* (Cambridge) 1: pp. 195-211.
- OLMSTEAD, A. T. 1948. *History of the Persian Empire [Achaemenid Period]* (Chicago).
- PAPER, HERBERT H. 1955. *The Phonology and Morphology of Royal Achaemenid Elamite* (Ann Arbor).
- PARAMASIVAM, K. 1979. "Effectivity and Causativity in Tamil." *Intl. Jour. of Dravidian Linguistics* 8: pp. 71-151.
- PEDERSEN, HOLGAR. 1962. *The Discovery of Language: Linguistic Science in the Nineteenth Century*. Translated by J. W. Spargo (Bloomington).
- POSSEHL, GREGORY L. 1979. *Ancient Cities of the Indus* (New Delhi).
- . Forthcoming. "Early Village Farming Communities in Western India." *American Archaeological Research in India*. Edited by J. Jacobson (New Delhi).
- RAMASWAMI AIYAR, L. V. 1930. "Dravidic Place-Names in the Plateaux of Persia." *Quarterly Jour. of the Mythic Soc.* 20: pp. 49-53.
- . 1938. "The Morphology of the Old Tamil Verb." *Anthropos* 33: pp. 747-781.
- RAO, G. SAMBASIVA. See Sambasiva Rao, G.
- REDMAN, CHARLES L. 1978. *The Rise of Civilization: From Early Farmers to Urban Society in the Ancient Near East* (San Francisco).
- REINER, ERICA. 1969. "The Elamite Language." *Handbuch der Orientalistik*. Edited by B. Spuler (Leiden), sect. 1, vol. 2, pt. 1-2, no. 2, pp. 54-118.
- . 1974. "Tall-i Malyān, Epigraphic Finds, 1971-72." *Iran* 12: p. 176.
- RUTTEN, MARGUERITE. 1953. *Les documents épigraphiques de Tshoga Zembil*. Mémoires de la Délégation archéologique en Iran 32 (Paris).
- SAMBASIVA RAO, GALI. 1973a. "A Comparative Study of Dravidian Noun Derivatives." Ph.D. dissertation, Cornell Univ.
- . 1973b. "On Proto-Dravidian Morphophonemics." *Intl. Jour. of Dravidian Linguistics* 2: pp. 217-242.
- . 1977. "Dravidian Alternations." *Indian Linguistics* 38: pp. 87-95.
- SCHIFFMAN, HAROLD F. 1969a. "Morphophonemics of Tamil Numerals." *Proceedings of the First Intl. Conference Seminar of Tamil Studies* (Kuala Lumpur) 2: pp. 698-710.
- . 1969b. "A Transformational Grammar of the Tamil Aspectual System." Ph.D. dissertation, Univ. of Chicago.
- . 1976. "Causativity and the Tamil Verb Base." *Intl. Jour. of Dravidian Linguistics* 5: pp. 238-248.
- SCHIFFMAN, HAROLD F., and CAROL M. EASTMAN, eds. 1975. *Dravidian Phonological Systems* (Seattle).
- SCHMANDT-BESSERAT, DENISE. 1977. "An Archaic Recording System and the Origin of Writing." *Syro-Mesopotamian Studies* 1, 2: pp. 1-32.
- . 1978. "The Earliest Precursor of Writing." *Scientific American* 238, 6 (June, 1978): pp. 50-59.
- . 1979a. "An Archaic Recording System in the Uruk-Jamdet Nasr Period." *Amer. Jour. of Archaeology* 83: pp. 19-48.
- . 1979b. "Reckoning Before Writing." *Archaeology* 3: pp. 22-31.
- SCHOENER, AUGUST CLEMENS. 1927. *Alt-dravidisches: eine namenkundliche Untersuchung* (Partenkirchen).
- SCHWARTZBERG, JOSEPH E., ed. 1978. *A Historical Atlas of South Asia* (Chicago).
- SEBEOK, THOMAS A., ed. 1969. *Linguistics in South Asia*. Current Trends in Linguistics 5 (The Hague).
- SHANMUGAM, S. V. 1971. *Dravidian Nouns: A Comparative Study*. Dept. of Linguistics, Pub. 25 (Annamalainagar).
- . 1972. "Dental and Alveolar Nasals in Dravidian." *Bull. of the School of Oriental and African Studies* (London) 35: pp. 74-84.
- SHAPIRO, MICHAEL, and HAROLD F. SCHIFFMAN. 1975. *Language and Society in South Asia* (Seattle).
- SODEN, WOLFRAM VON. 1965. *Akkadisches Handwörterbuch* (Wiesbaden).
- SOUTHWORTH, FRANKLIN C. 1976. "On Subgroups in Dravidian." *Intl. Jour. of Dravidian Linguistics* 5: pp. 114-137.
- SOUTHWORTH, FRANKLIN C., and MAHADEV L. APTE, eds. 1974. *Contact and Convergence in South Asian Languages* (Trivandrum).
- STÈVE, MARIE-JOSEPH. 1962-1963. "Textes Elamites de Tchogha-Zanbil." *Iranica Antiqua* 2: pp. 22-76, 3: pp. 102-123.
- . 1967. "Lexiques des textes élamites." *Textes Elamites et Accadiens de Tchoga-Zanbil, Tchoga-Zanbil (Dur-Untash)* 3. Mémoires de la Délégation archéologique en Iran (Paris) 41: pp. 117-129.
- STOLPER, MATTHEW W. 1976. "Preliminary Report on Texts from Tāl-e Malyān 1971-1974." *Proceedings of the Fourth Annual Symposium on Archaeological Research in Iran*. Edited by Firouz Bagherzadeh (Tehran), pp. 89-100.
- SUBBAYYA, K. V. 1909. "A Primer of Dravidian Phonology." *Indian Antiquary* 38: pp. 159-170, 201-219.
- . 1910-1911. "A Comparative Grammar of the Dravidian Languages." *Indian Antiquary* 39: pp. 145-158, 40: p. 184.
- SUBRAHMANYAM, P. S. 1965. "The Intransitive and Transitive Suffixes of Kui." *Jour. of the Amer. Oriental Soc.* 85: pp. 551-565.
- . 1968. "The Position of Tuḷu in Dravidian." *Indian Linguistics* 29: pp. 47-66.
- . 1969a. "The Gender and Number Categories in

- Dravidian." *Jour. of the Annamalai Univ.: Humanities* 26: pp. 79–100.
- . 1969b. "The Central Dravidian Languages." *Jour. of the Amer. Oriental Soc.* 89: pp. 739–750.
- . 1970. "The Personal Pronouns in Dravidian." *Bull. Deccan College Research Inst.* 28: pp. 1–16.
- . 1971. *Dravidian Verb Morphology: A Comparative Study*. Dept. of Linguistics, Pub. 24 (Annamalainagar).
- . 1975. "Quantitative Variation in Dravidian." *Indian Linguistics* 36: pp. 1–15.
- . 1976. Review of *Gender and Number in Proto-Dravidian* by Bh. Krishnamurti. *Intl. Jour. of Dravidian Linguistics* 5: pp. 138–143.
- . 1977a. "The Toda Reflexes of Proto-Dravidian *1 and *1." *Jour. of the Amer. Oriental Soc.* 97: pp. 178–181.
- . 1977b. "'Dravidian Alternations': A Critique." *Indian Linguistics* 38: pp. 227–233.
- SUBRAMONIAM, V. I. 1968. "A Problem in the Reconstruction of the Proto-Dravidian Nasal Phonemes." *Pradidānam: Indian, Iranian and Indo-European Studies Presented to F. B. J. Kuiper on his 60th Birthday* (The Hague), pp. 344–347.
- SUMNER, WILLIAM. 1974. "Excavations at Tall-i Malyan, 1971–72." *Iran* 12: pp. 155–175, 177–180.
- TAMIL LEXICON. 1924–1939 (6 v. + supp., Madras).
- TARN, W. W. 1951. *The Greeks in Bactria and India* (Cambridge).
- TRAUTMAN, THOMAS R. 1979. "The Study of Dravidian Kinship." *Aryan and Non-Aryan in India*. Michigan Papers on South and Southeast Asia, edited by M. M. Deshpande and P. E. Hook (Ann Arbor) 14: pp. 153–173.
- TROMBETTI, ALFREDO. 1913. *La posizione linguistica dell'Elamitico* (Bologna).
- VESPER, DON R. 1971. "Kurukh Syntax with Special Reference to the Verbal System." Ph.D. dissertation, Univ. of Chicago.
- WEISS, HARVEY, and T. CUYLER YOUNG, JR. 1975. "The Merchants of Susa: Godin V and Plateau Lowland Relations in the Late Fourth Millennium B. C." *Iran* 13: pp. 1–17.
- WEISSBACH, F. H. 1911. *Die Keilinschriften der Achämeniden* (Leipzig).
- WINFIELD, W. W. 1928. *A Grammar of the Kui Language*. Bibliotheca Indica 252 (Calcutta).
- ZVELEBIL, KAMIL. 1962. "Personal Pronouns in Tamil and Dravidian." *Indo-Iranian Jour.* 6: pp. 65–69.
- . 1970. *Comparative Dravidian Phonology*. *Janua Linguarum, Series Practica* 80 (The Hague).
- . 1971. "The Present Tense Morph in Tamil." *Jour. of the Amer. Oriental Soc.* 91: pp. 442–445.
- . 1972a. "The Descent of the Dravidians." *Intl. Jour. of Dravidian Linguistics* 1: pp. 57–63.
- . 1972b. "Dravidian Case Suffixes: Attempt at a Reconstruction." *Jour. of the Amer. Oriental Soc.* 92: pp. 272–276.
- . 1974. "Dravidian and Elamite—A Real Breakthrough?" *Jour. of the Amer. Oriental Soc.* 93: pp. 384–385.
- . 1977. *A Sketch of Comparative Dravidian Morphology, Part 1: Nouns and Adjectives* (The Hague).

INDEX OF LEXICAL ETYMA, SIMILAR PAIRS, AND GRAMMATICAL MORPHEMES IN PED

Ordering: a, i, u, e, o, ə, (V), h, w, k, c, š, t, n, p, m, (N), y, r, l, v, r, t.

Lexical Etyma (from section 422):

			Phon. Rules	Page:
1.	*aš	cattle, herd of cattle	1-11	95
2.	*it-	to put, place	2-12-, El.1a	95
3.	*inc-	to receive	2-14-10-, El.2,4, Dr.7	95
4.	*it(a)š	great, large	2-22-(1)-11, Dr.2	95
5.	*uk-	to be above	3-9-	95
6.	*upať	brick	3-15-1-22	96
7.	*um-	to process grain	3-16-	96
8.	*uľ-	inside, interior; mind, heart	3-21-	96
9.	*uť-	to consider, believe	3-22-	96
10.	*en-	to say, <i>quotative</i>	4-14-, El.1a	96
11.	*ere-	to burn, blaze, scorch	4-17-4-, El.6, Dr.1	96
12.	*otah-	to help	5-13-1-7-, El.1a, Dr.2,8	96
13.	*on-ťə	one thing	5-14-22-6	97
14.	*(h)aš-	to measure, set limits	(7)-1-11-, El.7b	97
15.	*hať-	to destroy by pounding	7-1-12-	97
16.	*han-	to like, love	7-1-14-	97
17.	*(h)api-	to apply pressure	(7)-1-15-2-, El.7b	97
18.	*hiť-	to herd (goats); goat	7-2-12-, El.7b	97
19.	*hit-	to distribute	7-2-13-, El.2,5,7b	97
20.	*huľ-	to exist, be (in a place)	7-3-21-, El.7b	97
21.	*heš-	to know how to	7-4-11-, El.7b	98
22.	*hoť-	to break into pieces	7-5-12-	98
23.	*kať	bed, throne	9-1-12	98
24.	*kap	cover	9-1-15, Dr.1,6	98
25.	*karə	young animal	9-1-17-6	98
26.	*kiť(-i)-	(to have) well being, good fortune	9-2-22-(2)-, Dr.4a	98
27.	*kute-	to settle, set right	9-3-13-4-, El.5, Dr.1	99
28.	*koť-	arrow	9-5-12-	99
29.	*ca-	to move forward	10-1-, Dr.5c	99
30.	*cah-	to die	10-1-7-, Dr.5c,8	99
31.	*cam-	beauty, grace	10-1-16-, Dr.5a,7	99
32.	*car-	to tear apart, tear out	10-1-17-, Dr.5c	99
33.	*ci-	to give (inferiors), allow	10-2-, Dr.5a,5c	100
34.	*cik-	to scrape off, pare off	10-2-9-, El.2, Dr.5c	100
35.	*cina	small, young	10-2-14-1	100
36.	*cink-	to wane	10-2-14-9-, Dr.1,7	100
37.	*cu-	to see	10-3-, El.5, Dr.5c	100
38.	*cel	prosperity	10-4-18, El.6	100
39.	*cok-	to put in order	10-5-9-, El.5, Dr.5c	100
40.	*cok-	to pull off	10-5-9-, El.4	100
41.	*col-	to speak aloud	10-5-18-	100
42.	*šak-	to be (equivalent to), become	11-1-9-	101
43.	*šak	sprout	11-1-9	101
44.	*šar-	to collect	11-1-17-	101
45.	*šal-	head, uppermost part	11-1-19-	101
46.	*šař-	to be low	11-1-20a-	101
47A.	*šař	shoot, stalk	11-1-20b	101
47B.	*šař-	to sprout	11-1-20b-	101
48.	*šať-	to cut off, cut down	11-1-22-	101
49.	*šin-	to arrive, yield	11-2-14-	102
50.	*šuť-	to relinquish	11-3-22-	102
51.	*šet-	to pay (tax or tribute)	11-4-22-	102
52.	*taľ-	to push in	13-1-21-	102

53.	*tuk-	to push	13-3-9-	102
54.	*tuṭu-	to mention, say	13-3-22-3-, El.5	102
55.	*tenk-	to pull, drag; take	13-4-14-9-, El.6, Dr.1,7	102
56.	*tep-	to put down	13-4-15-	102
57.	*to(h)-	to seize	13-5-(7)-	103
58.	*toḥ-	to pound, crush, trample	13-5-7-, Dr.2,8	103
59.	*ton-p-	to appear, occur	13-5-14-15-	103
60.	*toḷ-	to perforate, bore	13-5-21-	103
61.	*na-mp-	to believe, trust in	14-1-16-15-, Dr.7	103
62.	*naḷ	day	14-1-21	103
63.	*ni	you	14-2, El.2	103
64.	*noš-k-	to look at, watch	14-5-11-9-	103
65.	*par	young one	15-1-17	104
66.	*par-	to look at, watch	15-1-17-	104
67.	*pari-	to go away	15-1-17-2-	104
68.	*paṭ-	to arrive, happen	15-1-22	104
69.	*paṭi-	to pull, draw, drag	15-1-22-2-	104
70.	*piṭ-	to fix, determine, seize	15-2-12-	104
71.	*puk-	to enter (refuge)	15-3-9-, El.5	105
72.	*peš/c-	to appear, come into existence	15-4-11/10-, Dr.5c	105
73.	*peṭa-	to speak	15-4a-22-1-	105
74.	*pot	young animal	15-5-13	105
75.	*muḥṭa	(young) female (animal)	16-3-7-12-6, El.7b	105
76.	*muc-	to cover, close	16-3-10-, Dr.5c	105
77.	*vac-i-	to plane, remove, cut off	19-1-10-2-	105
78.	*vari-	to fix, tie, hold	19-1-17-2-	106
79.	*viši-	to perish	19-2-11-2-	106
80A.	*vila-k-	to be transverse	19-2-18-1-9-, El.1b	106
80B.	*vila-t-	to turn aside, divert	19-2-18-1-13-, El.1b	106
81.	*vur	place	19-3-17	106

Similar Pairs (from appendix II):

A1.	*atta	father	1-13-1	141
A2.	*amma	mother	1-16-1	141
A3.	*ah-	that (not far)	1-7-, Dr.8	141
A4.	*(h)ih-	this	(7)-2-7, El.7b, Dr.8	141
A5.	*huh-	that (remote)	7-3-7-, El.7b, Dr.8	142
A6.	*ḫah-	who, what	2-1-7-, El.7a, Dr.8	142
B1.	*akaṭa	rage	1-9a-1-18-, El.1c, El.7b	142
B2.	*akal-	to spread wide; floodplain	1-9a-3-18-, El.1c	142
B3.	*akuṭ-	to dig; excavation	1-9a-3-20b-, El.1c	142
B4.	*kol-	to kill	9a-5-18-	143
B5.	*kol-va-	to bring (in)	9a-5-21-19-1-	143
B6.	*vil(i)-	to spread, discharge, sound	19-2-21-(2)-, El.1b	143
B7.	*vem	back	19-4-16, Dr.7	143
B8.	*šu	flesh	11-3	144
C1.	*aṭaš	storeroom	1-22-1-11	144
C2.	*al-	not to be	1-18-	144
C3.	*(i)kel/wel-	to attack, conquer	(2-)9/8-4-18-	144
C4.	*hun	water; drink	7-3-14	145
C5.	*huṭ-	to be numerous, abundant	7-3-22-	145
C6.	*kuṭ-	to bring together	9-3-12-	145
C7.	*keṭ-	to lie down	9-4-12-, El.6, Dr.2	145
C8.	*cip	door	10-2-15, El.4	145
C9.	*cel-	to go on/away, pass	10-4-18-, El.4, Dr.5c	145
C10.	*tur-	to fill up	13-3-17-	146
C11.	*nah-	to shine forth	14-1-7-, Dr.8	146
C12.	*peṭ-	to strike (against)	15-4-12-, El.6	146
C13.	*peṭ-	to gather, pile up	15-4-22-, El.6	146
C14.	*por	heap, pile	15-5-17	146
C15.	*pol-	to be ruined	15-5-18-	146
C16.	*miṭ	life, vital force	16-2-12	146

C17.	*mel-(k)-	to overturn	16-4-18-(9)-	146
C18.	*va-	to come (in), bring in	19-1-	147
C19.	*vaš-əN	site, ground, earth	19-1-11-6-16	147
C20.	*viṭ-	to leave (behind), let go	19-2-12-, El.6	147
D1.	AE martukkaš : PSDr *maṭa(ṇ)k-	to engage, hire		147
D2.	AE kuti- : PSDr *kutiray	to carry, bear, uphold : horse		147

Grammatical Morphemes:

		Section:	Page:
*-a	possessive	522.31	110
*-a	subordinator	553.2	123
*-(a)š	noun formative	514	107
*-(a)nṭə	masculine noun formative	515	107
*-(a)nṭə	appellative ending (3s)	542.4	120
*al	negative (see appendix II, C2)	551.2	122
*i	personal pronoun (1s)	531	112
*i	personal pronoun (3)	536	115
*i(k)	personal pronoun (1s)	536.12	117
*-in	adnominal case ending	522.32	110
*-un	appellative ending (1p)	542.2	120
*-əkkə	adessive case ending	522.2	109
*-əṭ	emphatic clitic (1,p)	542.72	121
*-əN	noun formative	512	107
*-(V)š	verbal personal ending (3)	552.1	122
*-(V)n	accusative case ending	522.1	109
*-kə	appellative ending (1s)	542.1	119
*-ta(n)	resumptive/reflexive pronoun	535	115
*-ti	appellative ending (2s)	542.3	120
*-ti	verbal personal ending (2)	552.2	122
*-tə	noun formative	513	107
*-tə	locative/oblique case ending	522.4	110
*-tə	neuter appellative	542.62	120
*-tə	past marker	553.1	123
*-t-	causative augment	555.1	127
*ni	personal pronoun (2s) (see sec. 422: 63)	533	114
*nim	personal pronoun (2p)	534	115
*nəNkə	personal pronoun (1p)	532	114
*-pə	appellative plural	521.2	109
*-pə	appellative ending (3p)	542.5	120
*-maj	abstract noun formative	511	107
*man	auxiliary verb 'to become'	551.1	121
*-m	pronominal plural	521.1	108
*-N	durative/nonpast	554.1	124
*-(N)k	mediopassive	554.2	125
*-r (?)	human plural	542.71	120
*-∅	verbal neuter appellative	542.61	120

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